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THE RELATION BETWEEN HEALTH RATINGS OF SEVENTH AND EIGHTH GRADE
SCHOOL CHILDREN AND THEIR FAMILY SOCIAL AND ECONOMIC BACK-
GROUNDS, BRIGHAM CITY, UTAH, 1935-36

A Thesis

Presented to

The Committee on Graduate Work

Utah State Agricultural College

In Partial Fulfillment

of the requirements for the Degree

Master of Science in the School of

Commerce

Department of Sociology

By

Ralph Jenson, Jr.

May 1937

This Thesis written by Ralph Jenson, Jr. has been approved

and accepted by:

Professor in charge of Major Subject Date May 24, 1937

Dean over Major Department Date May 24, 1937

Chairman, Committee on Graduate Work Date May 25/37

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Dedication

The writer takes pleasure in dedicating this thesis to his beloved and faithful wife, De Lora R. Jenson, who has conscientiously assisted with numerous phases of the work. The real worth of her constant encouragement and advice has been invaluable.

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Foreword

Especially during the last century the health of school children has been a problem of deep concern. Many physical examinations have been given by numerous organizations with the intention of discovering organic disorders that might be detrimental to a child's normal social life. As a result of such study, humanity has generally come to recognize the social and economic costs of ill-health and has embarked on remedial and preventive campaigns to improve the well-being of children. Foundations have been endowed. Free clinics have been established to serve those families whose incomes prohibit them from securing medical services otherwise; county, city and school nurses and doctors have been employed in districts throughout the country to render treatment and give advice. Health educational campaigns have been conducted and organized health units and agencies have been instituted. Of late, socialized medicine has gained in popularity as a means of enabling certain unfortunate persons to benefit from expert services. All these efforts which have been directed mainly in the interests of school children have brought to light many interesting facts relevant to physical conditions that threaten good health.

Few doubt the value of knowing what evil effects diseased tonsils or teeth, diseased heart, curvature of the spine, defective feet, or other physical disorders may have upon the health of the child. Nor do most people question the importance of having these physical handicaps removed or corrected so that one may come nearer functioning to his normal capacity. It is generally recognized today that not only the welfare of the individual but the future of civilization depends greatly upon the health of its citizens.

To improve and add weight to the study of child welfare it is necessary to become acquainted with underlying "health" factors that inhibit normal social adjustment. This necessitates an objective study and understanding of the social and economic backgrounds that condition a child's physical, mental and social life. It is with this purpose in mind that this study was undertaken.

While it is probably true that individual, disjunctive endeavors can accomplish much toward alleviating social and economic conditions inimical to "good health", real effectiveness will ensue only as a result of unified action. In this respect it is hoped that this study and others that may follow will arouse public interest to the extent that intelligent, concerted action will be applied to detrimental environmental influences affecting "healthy" living.

Biological inheritance undoubtedly has a profound influence upon physical well-being, but in the discussion to follow only environmental factors, as they seem related to health, will be treated. It is not anticipated that the reader will interpret the subsequent relationships found between children's health status and certain social and economic conditions as being precise causes of poor health. Such definite conclusions are unwarranted when it is realized that other factors may also contribute to the same condition. After giving due weight to the influence of other factors there can be little doubt that the relationship between ill health and unfavorable economic and social conditions, found to exist in the course of this study, is causal in nature.

Acknowledgement

The writer feels a humble indebtedness to various individuals whose cooperation has made possible this study.

Gratitude is first expressed to Dr. Joseph A. Geddes, head of the department of sociology at the Utah State Agricultural College, for his keen interest, careful direction and constructive criticism throughout the work. Deserving credit is also due Principal Alf Freeman of the Junior High School in Brigham City, Utah for his stimulating suggestions and his willingness to place in the writer's trust certain school records pertinent to the problem. Thanks are also due the physical education director, Grant Prisby; the school coordinator, Cyril Beecher; and other members of the teaching staff.

For the cooperation of the county juvenile officer, Jesse W. Hoops, and the many families interviewed for the study I express sincere appreciation.

And last, but not least, indebtedness is felt toward departmental associates and friends who have given illuminating advice.

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Introduction

Preliminary Statement

This study is based primarily on a physical examination given to Brigham City seventh and eighth grade school children by two prominent Brigham City physicians. These doctors were engaged by the Box Elder Board of Education. A reasonable sum was paid for their time. It was their responsibility to inform the school officials as to the type or types of physical activity best suited to the physical needs of each child. As a guide for the examiner a list of physical defects for which each child was to be examined was inscribed on uniform individual health charts. On these prepared charts each physical deficiency found in a pupil was checked, and on the basis of the number and seriousness of one or more of these deficiencies he was assigned a physical rating of "A", "B", "C" or "D". These ratings were to enable the school personnel to better prescribe a program of physical education in harmony with the child's physical status.

It was primarily due to the availability of this data that the writer's curiosity was aroused to find what relationships, if any, might exist between the health conditions of these children and their educational achievements and their economic and social backgrounds.

Purposes

Purposes of this study are threefold: (1) to ascertain certain existing social, economic and educational conditions found among seventh and eighth grade children of Brigham City grouped according to physical rating; (2) to compare the groups with respect to these certain conditions; and (3) where it seems justified, to compare the

findings in this project with those disclosed by other research studies. Inasmuch as this is relatively a new field of research many of the comparisons with outside studies are indirect rather than of direct significance.

Sources of Data

A. School records

1. Health charts. As has already been mentioned above, a physical rating of "A", "B", "C" or "D" was recorded on the health chart of each child by doctors in charge of the examinations. In recording these ratings the doctors were required to rate each child according to the following standards: A physical rating of "A" permitted a child to participate, without restrictions, in any type of physical activity such as football, basketball, baseball and track--these being characteristic of the most vigorous and strenuous exercises; A "B" rating signified that a child could take part in only those physical exercises conducted within the regular physical education class periods; a "C" rating entitled the child to participate in special exercises designed to satiate his physical needs without endangering or aggravating his already precarious physical state; a "D" rating prohibited the child from taking part in any of the three specified degrees of exertion described above, thus excusing him from all floor work.

One of the two doctors employed examined all the boys and the other all the girls. The following bodily areas

and conditions were considered in determining the ratings: underweight, teeth, chest, posture, feet, ears, adenoids, tonsils, sinuses, goiter, skin, spine, heart, nutrition and nervous condition.

2. Teachers' roll books. Attendance and scholarship information concerning each sample child was obtained from class records kept by teachers.

B. Home Visits

A personal interview with one or both parents in the home of each child included in the sample constituted the basis for securing information relating to family and home conditions and for social, educational and economic backgrounds.

Methods of Securing the Data

All data, whether obtained from school records or by personal interview with family members, were recorded on prepared schedules especially designed for this purpose.

A total of one hundred two homes were visited, and each interview lasted approximately two hours. In addition to this source, much time was spent transcribing information from school records, consisting of health records and teachers' roll books, on to previously constructed schedules.

Scope

This investigation is confined to a sample of seventh and eighth grade school children residing in Brigham City, Utah and attending the local Junior High School in that city during 1935-36. It may be designated as a spot study. That is, conditions were recorded as found by the interviewer at the time of contact.

Sample

Inasmuch as each home visit required approximately two hours, Dr. Joseph A. Geddes suggested the sample be limited to about 100. Using this suggestion as a guide, 102 out of the total of 274 seventh and eighth grade children were selected for study.

Precaution was taken to eliminate personal prejudice and bias as much as possible in determining which children should be included. A frequency distribution by sex of all children (274) classified according to physical rating was made. This arrangement assisted in choosing a more nearly adequate and representative number of boys and girls from each group to make up the sample.

It was concluded that approximately 50% of children having a physical rating of "A" would make a fair sample for that particular classification. Because of the larger number with physical ratings of "B" it was decided that 30% would be adequate to represent the "B" group. Inasmuch as the number of children having ratings of "C" or "D" were small all were included. The table below will indicate just what percentage of boys and girls from each group were selected to comprise the sample.

Number and percent of Brigham City boys and girls from the seventh and eighth grades classified according to physical rating, who constitute the sample

Grouped : Brigham City seventh and eighth grade children										
Physical: Total Number				: No. and Percent in Sample						
Ratings :				: Boys		: Girls		: Total		
	: Boys	: Girls	: Total	: No.	: %	: No.	: %	: No.	: %	
"A"	: 37	: 19	: 56	: 18	: 48	: 10	: 53	: 28	: 50	
"B"	: 103	: 102	: 205	: 31	: 30	: 30	: 29	: 61	: 30	
"C"	: 4	: 7	: 11	: 4	: 100	: 7	: 100	: 11	: 100	
"D"	: 1	: 1	: 2	: 1	: 100	: 1	: 100	: 2	: 100	
TOTAL	: 145	: 129	: 274	: 54	: 37	: 48	: 37	: 102	: 37	

After determining the numbers to be included, the names of all children coming within specified groups, classified according to physical rating, were written on pieces of paper of uniform size and shape, placed in a box and well shaken. Names were extracted from these containers until the predetermined number was obtained.

Definitions

"C"- "D" group--This compound symbol designates children with physical ratings of "C" or "D". Because of the small number of cases in "D" group it is combined with "C" group for purposes of comparison. "C"- "D" is the symbol representing the two.

Study-children--Seventh and eighth grade Brigham City children constituting the sample for study.

Income--Money obtained by labor (daily occupation or work), rents, interest or business profits. It does not include gifts from relative or close associates, or direct relief assistance.

Extra-curricular activities--Student government offices, physical activities of a team-competitive nature and special interest activities such as a member of the state reading circle, member of a chorus, activity in dramatics, band work, or participation in other clubs or organizations within jurisdiction of the school.

Examination Of Health Charts

The primary purpose of this section is to ascertain the types and prevalence of certain physical defects found among 102 seventh and eighth grade children in Brigham City, Utah classified according to physical ratings of "A", "B", "C" or "D". A second purpose is to point out the predominance of certain physical defects over others found among these boys and girls. A third purpose involves a comparison of the sexes with respect to types and prevalence of physical defects. A fourth purpose is to compare where possible this data with that of other studies.

Inasmuch as data on child mortality and order of birth are probably closer related to the material in this section than to that discussed in any of the later sections, their discussion is also included here.

Throughout, the reader is urged to keep in mind that these physical examinations were made by two doctors and that neither was a specialist. One examined the girls and the other the boys. That fact that neither physician was a specialist does not necessarily render the examination less reliable for statistical treatment. A Public Health Bulletin confirms this opinion: "There is, however, considerable virtue in the physical examinations of the non-specialist, inasmuch as the defects found and recorded are probably more frequently of sufficiently marked degree to be of some importance". (1)

In addition, it should be remembered that the diagnostic purpose of the examination may influence to some extent the recording of certain defects and not others. It should also be borne in mind that diagnostic standards tend to vary among physicians.

Although doctors in this particular study had a general code to follow,

(1) "The Health of the School Child", U. S. Treasury Department, Public Health Service. Public Health Bulletin No. 200, Washington, D. C., 1931, p. 54.

there is still opportunity for a difference of opinion as to what constitutes a defect and to what extent a designated defect justifies restricting a child's physical activity.

The examining physicians were instructed to check all the physical defects for each child. Each child was then assigned a physical rating of "A", "B", "C" or "D". This physical rating assigned to each pupil was determined by the seriousness of one or a combination of several physical defects.

Physical Defects (Table 1)

Underweight

Only those children who were 10% or more underweight, using the Baldwin-Wood scale, were designated as being underweight.

In this study the data indicates underweight to be a more common condition among girls than boys. None of the "A" group boys are underweight as compared with four out of ten, or 40% of the "A" group girls. The percentages of underweight boys (38.7%) and underweight girls (40%) are very nearly equal in the "B" group. Seventy-five percent of the "C"- "D" girls and 20% of the boys are underweight. In each group, then, we find more girls underweight than boys.

When comparison is made between the groups (both sexes), we find 14.3% of "A" rated children underweight as compared with 39.3% of "B" and 53.8% of "C"- "D" children. As far as these data are concerned, the percentage of children underweight tends to increase as the health ratings decrease.

For all groups, less than one out of four (24.1%) boys and more than two out of five (45.8%) girls are underweight. This results ⁱⁿ slightly more than one-third (34.3%) of the boys and girls as being underweight.

When compared with a New York study in which 10% of the children were found to be 10% or more underweight ⁽²⁾, the Brigham City children show evidence of a higher percentage underweight. It must be remembered, however, that this difference may be due to a diversity of standards used in determining a deficiency in weight. The following quotation also stresses the disagreement of standards: "Underweight in both adults and children is one of those conditions toward which our attitude has been undergoing considerable change; moreover, the labeling as underweight depends on the use of arbitrary standards, and these have been subject to change". ⁽³⁾

Teeth

On the whole teeth defects are also slightly higher among girls than boys. However, one-sixth of "A" group boys have defective teeth while none of the girls in this group have such defects. In "B" group a little over two-fifths (41.9%) of the boys have teeth defects as compared with three-fifths of the girls. In the "C"- "D" group half of the girls and two-fifths of the boys have defective teeth.

Comparing groups (boys and girls combined) "A" group shows evidence of the fewest children with defective teeth, 10.7 percent, as compared with 50.8 percent for "B" group, which rates highest, and 46.2 percent for "C"- "D" group.

Combining all groups we discover that one-third of the boys and more than two-fifths (45.8%) of the girls have poor teeth. Totaling the sexes and groups we find 39.2% with some teeth defect. This percentage is somewhat lower than that found in a study of the health of school children in New York conducted by the U. S. Public Health Service which reports 65.9 percent with defective teeth.

(2) Rogers, Frederick James. "Physical Defects of School Children", School Health Studies Bulletin No. 15, p. 21.

(3) Ibid p. 21.

Chest

Neither boys nor girls in "A" group have chest defects. Six and five-tenths percent of the boys in "B" group and 20% of the boys in "C"- "D" group are found with this condition. None of the girls in any of the groups have chest deficiencies.

Only 2.9% of the children included in this study have a chest disorder of any kind.

Posture

Diagnosis of posture is a highly subjective thing.

"Like our facial features, bodily build and carriage is molded by heredity and by congenital conditions".⁽⁴⁾

It is for this reason that postures diagnosed as "bad" are not necessarily indications of a physical handicap.

Conditions of poor posture are found to be more common among boys than girls in the Brigham City group. In fact, the ratio is more than 2 to 1. In this study, as the health rating becomes lower, the incidence of poor posture increases for both boys and girls. More than one-fifth (22.2%) of "A" group boys as compared with one-tenth of "A" group girls have poor posture. For "B" group, which is still higher, we find 74.2% of the boys as compared with 20% of the girls with poor posture. "C"- "D" group ranks highest in posture deficiency with four-fifths (80%) of the boys and three-eighths (37.5%) of the girls showing the condition.

Comparing health groups it is found that less than one-fifth (17.9%) of "A" group children, less than one-half (47.5%) of "B" group, and more than half (53.8%) of "C"- "D" children have abnormal postures. Considering all children studied (both sexes and all groups) approximately two-fifths

(4) Rogers, Frederick James. "Physical Defects of School Children". School Health Studies, Bulletin No. 15, 1929, p. 23.

(40.2%) have a condition of posture thought to be serious enough from a health standpoint to be checked by the examiners.

Agreement among physicians as to what constitutes "good" "poor" or "very poor" posture is still lacking. Naturally then, the findings of studies vary.

"Of two physicians making a special survey of elementary school children one reported 4.2 percent as having either "poor" or "very poor" posture and the other 23 percent, while the 70 medical inspectors of one city differed in their findings of poor posture from 1 to 19 percent". (5)

Even so, it appears that the children studied in Brigham City have a higher percentage of posture defectives than the school children mentioned in the above quotation.

Feet Defects

For each of the health groups, the percentage of boys with feet defects exceeds the percentage for girls. For example, in "B" group 41.9% of the boys and 17% of the girls are found with defective feet; in "C"- "D" group 20% of the boys and 12.5% of the girls have feet defects; and in "A" group 16.7% of the boys and none of the girls have feet defects.

From the above data it is obvious that "A" group ranks highest, "C"- "D" next and "B" lowest in regard to percentage of children (sexes combined) with defective feet.

Whereas only 12.5% of all the girls have feet defects, 31.5% of all the boys show some defects of feet. Combining the sexes (all groups) it is found that 22.5% have a defect in one or both feet.

Some other studies on feet defects show evidence of its appearance in girls more often than in boys. One possible explanation for Brigham City study results not agreeing with findings in these other studies may

(5) Rogers, Fredrick James. "Physical Defects of School Children".
School Health Studies Bulletin No. 15, 1929, p. 24.

be that the testing standards and purposes of the examiners varied.

Ears

The percentage of boys (20.4%) (all groups) having ear defects exceeds that for girls (6.2%). The average for both is 13.7 percent.

Ear defects are found to be most common among "C"- "D" children. Only 3.6 percent of all the children in "A" group have a hearing impairment as compared with 16.4% in "B" group and 23.1% in "C"- "D" group.

The same is evident when the sexes are considered separately. "C"- "D" children come first with 40% of the boys and 12.5% of the girls with an ear disorder. "B" group children rank next with 25.8% of the boys and 7% of the girls. "A" group has the smallest percentage of both boys and girls with impaired hearing--5.6% of the boys and none of the girls.

Summarizing for all groups we find 20.4% of the boys with impaired hearing and only 6.2% of the girls. This indicates that approximately three times as many boys as girls are afflicted with an ear disorder. Totalling the two it is found that 13.7% of the Brigham City children under study have ear defects. This latter finding shows conditions comparable with those found in a study conducted by the U. S. Public Health Service in Porter County, Indiana. In this study the investigators found that 13% of the children suffered from impaired hearing.

Adenoids

No adenoids are found among either boys or girls in "A" group. Three boys and five girls or 13.1% from "B" group have adenoids. No boys in "C"- "D" group have this ailment as compared with 3 out of 8 or 37.5% of the girls. The data show that children with "A" ratings are without adenoids which cannot be said for "B" or "C"- "D" boys and girls.

Of the 54 boys tested only 5.6% show evidence of adenoids. The percentage for girls ran somewhat higher (16.7%), while for the whole group ten and eight-tenths percent of all children examined had them. This percentage for all study-children is somewhat higher than the percentage reported in a Public Health Bulletin number 200 "The Health of the School Child" which reports 6.34% of children with adenoids. It is also reported in this study conducted by the Public Health Service that adenoids are more common among boys than girls. This is also found to be true in the Brigham City area.

Tonsils

Defective tonsils are found to be more prevalent among girls than boys with the exception of group "A" in which none of the girls have defective tonsils as against 11.1 percent of the boys. Group "B" has the greatest percentage with defective tonsils; the boys have 12 out of 31 (38.7%) and the girls 18 out of 30 (60%) with an average of 49.2 percent for the group. "C"- "D" group ranks second with 20 percent of its boys and 37.5 percent of its girls with tonsil disorders resulting in an average of 30.8 percent for the group. "A" group has the fewest number with defective tonsils and percentage being much smaller (7.1%) than for any group, both sexes combined.

Totaling all groups we discover more than one out of every five boys with defective tonsils as compared with more than two out of every five girls. Thrity-five and three-tenths percent of all pupils examined have diseased tonsils.

In Public Health Bulletin No. 200, above referred to, less than one-third (30.68%) of the children examined possessed tonsil defects. In this study bad tonsils were slightly more common among girls than boys. These

Table 1

Number and percent of children having specified physical defects by groups and for all groups combined of seventh and eighth grade boys and girls classified according to physical rating, Brigham City, Utah, 1935

		Number and Percent of Children Having Specified Physical Defects																				
Groups	:Total:	: No. :	Under- :	Teeth :	Chest :	Posture :	Feet :	Ears :	Aden- :	Tonsils :	Sinuses :	Goiter :	Skin :	Heart :	Nu- :	Nervous :	Spine :					
	: in :	weight :	:	:	:	:	:	:	: oids :	:	:	:	:	:	: trition :	Cond. :	:					
	:Group:	NO. :	% :	No. :	% :	No. :	% :	No. :	% :	No. :	% :	No. :	% :	No. :	% :	No. :	% :	No. :	% :	No. :	% :	
"A" Group :																						
Boys	:	18	: 0	: 0.0	: 3	: 16.7	: 0	: 0.0	: 4	: 22.2	: 3	: 16.7	: 1	: 5.6	: 0	: 0.0	: 2	: 11.1	: 0	: 0.0	: 0	: 0.0
Girls	:	10	: 4	: 40.0	: 0	: 0.0	: 0	: 0.0	: 1	: 10.0	: 0	: 0.0	: 0	: 0.0	: 0	: 0.0	: 1	: 10.0	: 0	: 0.0	: 2	: 20.0
Both	:	28	: 4	: 14.3	: 3	: 10.7	: 0	: 0.0	: 5	: 17.9	: 3	: 10.7	: 1	: 3.6	: 0	: 0.0	: 2	: 7.1	: 1	: 3.6	: 0	: 0.0
"B" Group :																						
Boys	:	31	: 12	: 38.7	: 13	: 41.9	: 2	: 6.5	: 23	: 74.2	: 13	: 41.9	: 8	: 25.8	: 3	: 9.7	: 12	: 38.7	: 0	: 0.0	: 0	: 0.0
Girls	:	30	: 12	: 40.0	: 18	: 60.0	: 0	: 0.0	: 6	: 20.0	: 5	: 17.0	: 2	: 7.0	: 5	: 17.0	: 18	: 60.0	: 19	: 63.3	: 1	: 3.3
Both	:	61	: 24	: 39.3	: 31	: 50.8	: 2	: 3.3	: 29	: 47.5	: 18	: 29.5	: 10	: 16.4	: 8	: 13.1	: 30	: 49.2	: 19	: 31.1	: 1	: 1.6
"C-D" Group :																						
Boys	:	5	: 1	: 20.0	: 2	: 40.0	: 1	: 20.0	: 4	: 80.0	: 1	: 20.0	: 2	: 40.0	: 0	: 0.0	: 1	: 20.0	: 0	: 0.0	: 1	: 20.0
Girls	:	8	: 6	: 75.0	: 4	: 50.0	: 0	: 0.0	: 3	: 37.5	: 1	: 12.5	: 1	: 12.5	: 3	: 37.5	: 3	: 37.5	: 6	: 75.0	: 2	: 25.0
Both	:	13	: 7	: 53.8	: 6	: 46.2	: 1	: 7.7	: 7	: 53.8	: 2	: 15.4	: 3	: 23.1	: 3	: 23.1	: 4	: 30.8	: 6	: 46.2	: 2	: 15.4
Total :																						
Boys	:	54	: 13	: 24.1	: 18	: 33.3	: 3	: 5.6	: 31	: 57.4	: 17	: 31.5	: 11	: 20.4	: 3	: 5.6	: 15	: 27.8	: 0	: 0.0	: 0	: 0.0
Girls	:	48	: 22	: 45.8	: 22	: 45.8	: 0	: 0.0	: 10	: 20.8	: 6	: 12.5	: 3	: 6.2	: 8	: 16.7	: 21	: 43.7	: 26	: 54.2	: 3	: 5.6
Both	:	102	: 35	: 34.3	: 40	: 39.2	: 3	: 2.9	: 41	: 40.2	: 23	: 22.5	: 14	: 13.7	: 11	: 10.8	: 36	: 35.3	: 26	: 25.3	: 3	: 2.9

findings compare with those found in Brigham City, although the disparity of occurrence as between boys and girls and for the total is greater for Brigham City study-children.

"In the Porter County survey 'enlarged or diseased' tonsils were found among 15.4 percent of all children". (6)

Compared with this finding the Brigham City and Public Health studies report on an average about twice as many children with defective tonsils.

Sinuses

Sinus trouble, as far as these examinations are concerned, seems to be primarily a female disturbance. None of the boys are reported as having sinus trouble but more than half (54.2%) of the girls are suffering with it.

The group comparison shows that among "C"- "D" girls 75 percent have sinus defects; "B" girls have 63.3 percent and "A" girls but 10%.

According to these findings we are safe in saying that sinus defects increased among these children as their health rating became lower.

Goiter

Goiters and sinuses were found only among the girls. The "A" group girls have no indication of goiter, "B" group has only 3.3% with goiter and "C"- "D" group has 25%, or one girl in 4 with goiter.

For all seventh and eighth grade children examined 2.9 percent are found to have a goiter. This compares with the reports of an examination of nearly 600,000 children in New York State in which 2 percent were reported with goiter. From the evidence appearing in various studies concerning this defect it was generally found to be more common among girls

(6) Rogers, Frederick James. "Physical Defects of School Children". School Health Studies Bulletin No. 15, 1929, p. 13.

than boys. The following quotation further substantiates this tendency.

"Simple goiter shows by far the largest ratio, the prevalence of this condition among girls being about six times what it is among boys". (7)

Skin

Unhealthy or diseased skin are conditions found more frequently among the "C"- "D" children than the children in any of the other groups. In this group one boy out of five and three girls out of eight show evidence of having unhealthy skin.

Skin defects are absent among boys in "A" and "B" groups whereas one-fifth of the "A" girls and approximately one-eighth of the "B" girls have unhealthy skin.

Again for defective skin, as for sinuses and goiter, we find a greater percentage of girls than boys showing the condition. In comparative figures, 18.7% of the girls and 1.9% of the boys have skins thought by the physicians to be defective. Of all the study-children in Brigham City, 19.8% have unhealthy or diseased skins.

Heart

It seems evident from this data that heart defects carried much weight in determining the physical rating of each child. This statement may be verified by the fact that no "A" child has a heart ailment considered serious enough to impair the general health. In "B" group there is only slightly more than one-eighth (12.9%) of the boys and one-thirtieth (3.3%) of the girls with heart defects. These figures are somewhat lower than for "C"- "D" boys where 80 percent is found, or the girls where 62.5 percent have heart defects.

From these comparisons it is readily obvious that children considered

(7) "The Health of School Children". Public Health Bul. No. 200, p. 70.

as being in "A" physical condition are free from heart defects. This cannot be said for "B" rated children nor "C"- "D" rated children the latter of which especially have a high percentage with heart trouble .

When considering the totals for boys and girls (all groups), we find heart ailments slightly more numerous among boys than girls--14.8% and 12.5% respectively. In a study conducted by the United States Public Health Service (8) it is reported that the affliction of bad hearts is generally more common among girls than boys. In this same study but 3.51 percent of the children had heart defects as against 13.7 percent for Brigham City study-children. This comparison tends to signify more heart defects among children in this area when compared with the New York study of the Public Health Service. It must be kept in mind however, that standards of diagnosis vary considerably among physicians and that the purposes of the examinations are not always the same.

Nutrition

Poor nutrition is practically equal among boys (46.3%) and girls (41.7%) when all groups are combined. On the whole the extent of malnutrition is greatest in "C"- "D" group, that is, 69.2 percent of the children in this group show evidence of this condition. "B" group comes next with 55.7 percent and "A" group has least with 7.1 percent. More "C"- "D" girls (75%) than boys (60%) show evidence of poor nutrition. In "B" group the opposite is the case--more boys (71%) than girls (40%) are seemingly malnourished. In "A" group none of the boys and only 2 of the girls are under nourished. Although there may be other factors operating, there seems to be some relationship between the family incomes of these

(8) "The Health of School Children". Public Health Bulletin No. 200, p. 55, 68.

various health groups and the percentage of children undernourished in each group.⁽⁹⁾

More than twice (44.1%) as many of the children in the Brigham City study show evidence of malnutrition as compared with the findings in New York schools in 1921 (17.9%).⁽¹⁰⁾ It may be that the depression years will account for a portion of this difference.

Nervous Condition

The data indicate there is relatively little serious nervous trouble among the Brigham City study-children. Only two children out of 102 are recorded with this condition; one "B" boy and one "C"-~~"D"~~" girl.

Spine

The occurrence of spine defects is almost negligible among Brigham City seventh and eighth grade pupils. But four children are found with defective spines and all are girls--three in "B" group and one in "C"-~~"D"~~" group. Totalling, it is found that 8.3% of the girls have spine disorders.

Figure 1 shows the percentage of children in each health group with each specified physical defect.

Figure 2 indicates the proportion of boys and girls with each physical defect. Nutrition, posture, feet, ears, and all chest defects are more common among the boys, while teeth, underweight, sinuses, adenoids, tonsils, skin, spine and goiter defects are found more frequently among the girls.

Foremost in the order of greatest frequency, among children included in this study, are the defects of nutrition, posture, teeth, tonsils and underweight.

(9) For family incomes see section on economic background (Table 5)

(10) Rogers, Frederick James. "Physical Defects of School Children". School Health Studies No. 15, p. 21.

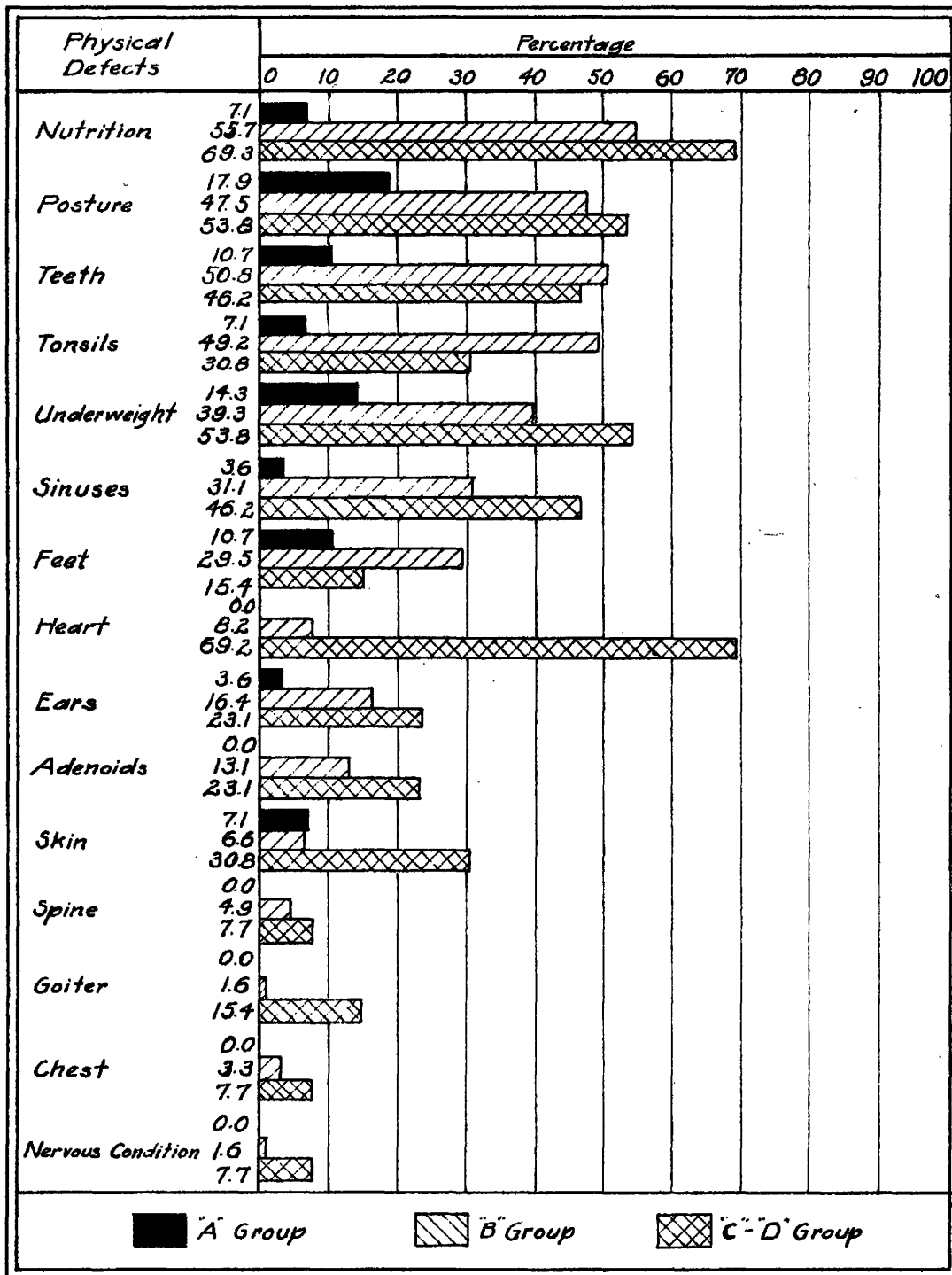


Figure 1. Percentage of children having certain physical defects by groups of seventh and eighth grade children classified according to physical ratings, Brigham City, Utah, 1935

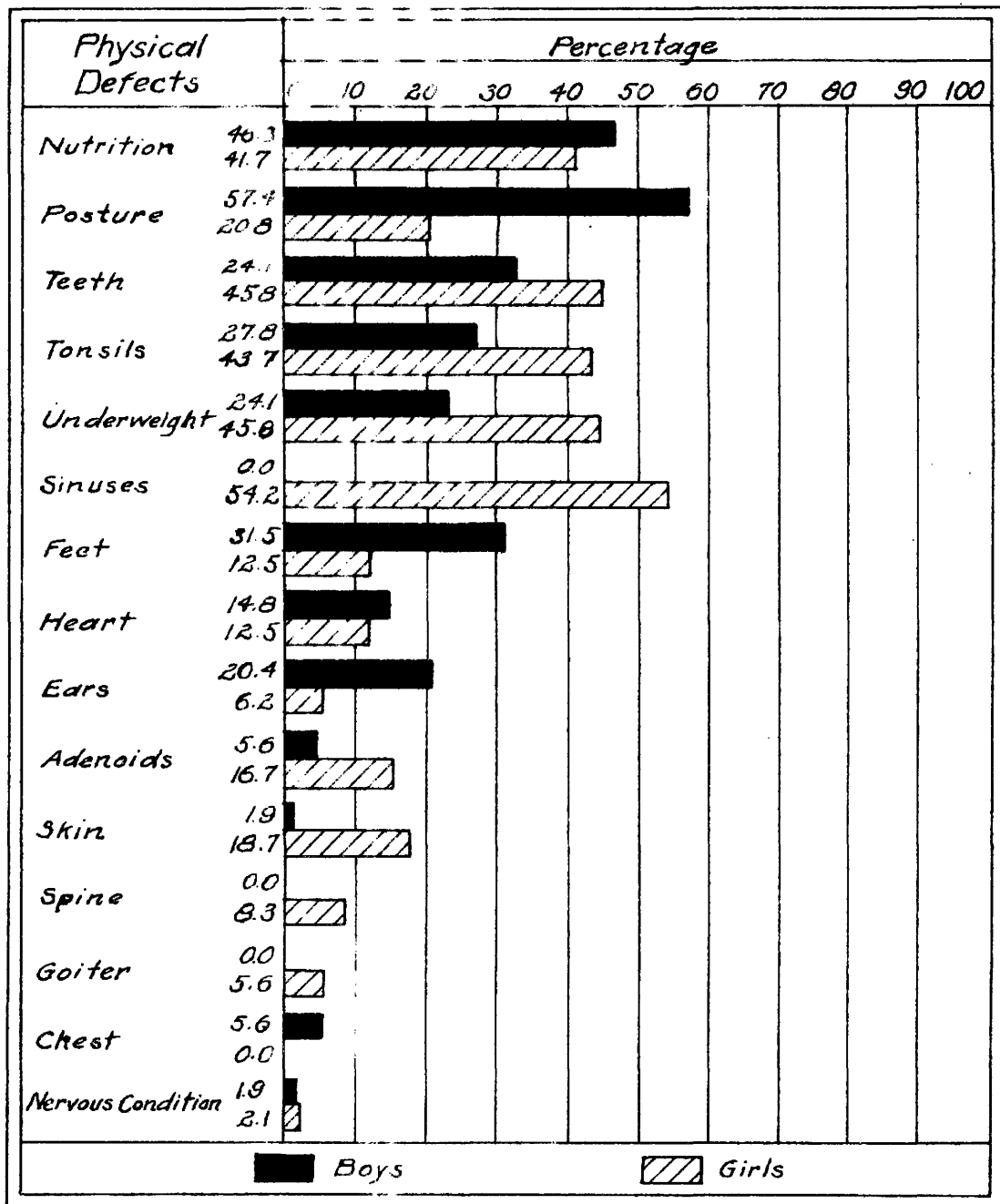


Figure 2. Percentage of boys and girls having specified physical defects, Brigham City, Utah, 1935

Number of Physical Defects

As indicated by the data in table 2 it is not seriousness of defect alone but also average number of physical defects that increases as we descend the scale of physical ratings. It is also evident that the girls exceed the boys for average number of defects except in "B" group and the discrepancy there is but one-tenth of a defect less for the girls than the boys.

Forty-two and nine-tenths percent of "A" children are devoid of physical defects. This is the only group in which children are found without some defective condition. Of "A" boys none have more than 2 defects, and of the girls the range is from 0 to 3. The average number of defects for "A" girls exceeds that for "A" boys by three-tenths of a defect, and the average number of physical defects is .8 per child.

According to the data no children in "A" group have more than three defects whereas more than half (51.6%) of "B" boys have more than three, the range being from 1 to 6 and the average per boy 3.6. Even though the girls' range is from 1 to 8 defects, a smaller percentage (43.3%) have more than three when compared with "B" boys, and their average number per child is only .1 of a defect less than the average number for "B" boys.

Of the five boys in "C"- "D" group four have more than three defects, and of the eight girls six have more than three. In this group the girls exceed the boys by an average of 1.6 defects per child.

It may be noted that all "A" children fail to exceed the average total (3) number of physical defects for all groups combined. This same statement does not hold true for "B" and "C"- "D" children.

In conclusion, we may say that, insofar as these data are concerned,

Table 2

Number of specified physical defects by groups and for all groups combined among seventh and eighth grade boys and girls classified according to physical rating, Brigham City, Utah, 1935-36

Groups	Total: No.	Number and Percent Having Specified Number of Defects														Average No. of Defects
		0	1	2	3	4	5	6	7	8	9	10				
		No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	
<u>"A" Group</u>																
Boys	18	8 : 44.4	7 : 38.9	3 : 16.7												.7
Girls	10	4 : 40.0	3 : 30.0	2 : 20.0	1 : 10.0											1.0
Both	28	12 : 42.9	10 : 35.7	5 : 17.9	1 : 3.5											.8
<u>"B" Group</u>																
Boys	31		2 : 6.5	5 : 16.1	8 : 25.8	7 : 22.6	5 : 16.1	4 : 12.9								3.6
Girls	30		3 : 10.1	7 : 23.3	7 : 23.3	4 : 13.3	5 : 16.7	2 : 6.7	1 : 3.3	1 : 3.3						3.5
Both	61		5 : 8.2	12 : 19.7	15 : 24.6	11 : 18.1	10 : 16.4	6 : 9.8	1 : 1.6	1 : 1.6						3.6
<u>"C"- "D" Group</u>																
Boys	5		1 : 20.0			2 : 40.0	1 : 20.0	1 : 20.0								4.0
Girls	8				2 : 25.0	1 : 12.5	2 : 25.0		1 : 12.5	1 : 12.5			1 : 12.5			5.6
Both	13		1 : 7.7		2 : 15.3	3 : 23.1	3 : 23.1	1 : 7.7	1 : 7.7	1 : 7.7			1 : 7.7			5.0
<u>Total</u>																
Boys	54	8 : 14.8	10 : 18.5	8 : 14.8	8 : 14.8	9 : 16.6	6 : 11.1	5 : 9.4								2.7
Girls	48	4 : 8.3	6 : 12.5	9 : 18.7	10 : 20.8	5 : 10.4	7 : 14.6	2 : 4.2	2 : 4.2	2 : 4.2			1 : 2.1			3.4
Both	102	12 : 11.8	16 : 15.7	17 : 16.7	18 : 17.5	14 : 13.7	13 : 12.7	7 : 6.9	2 : 2.0	2 : 2.0			1 : 1.0			3.0

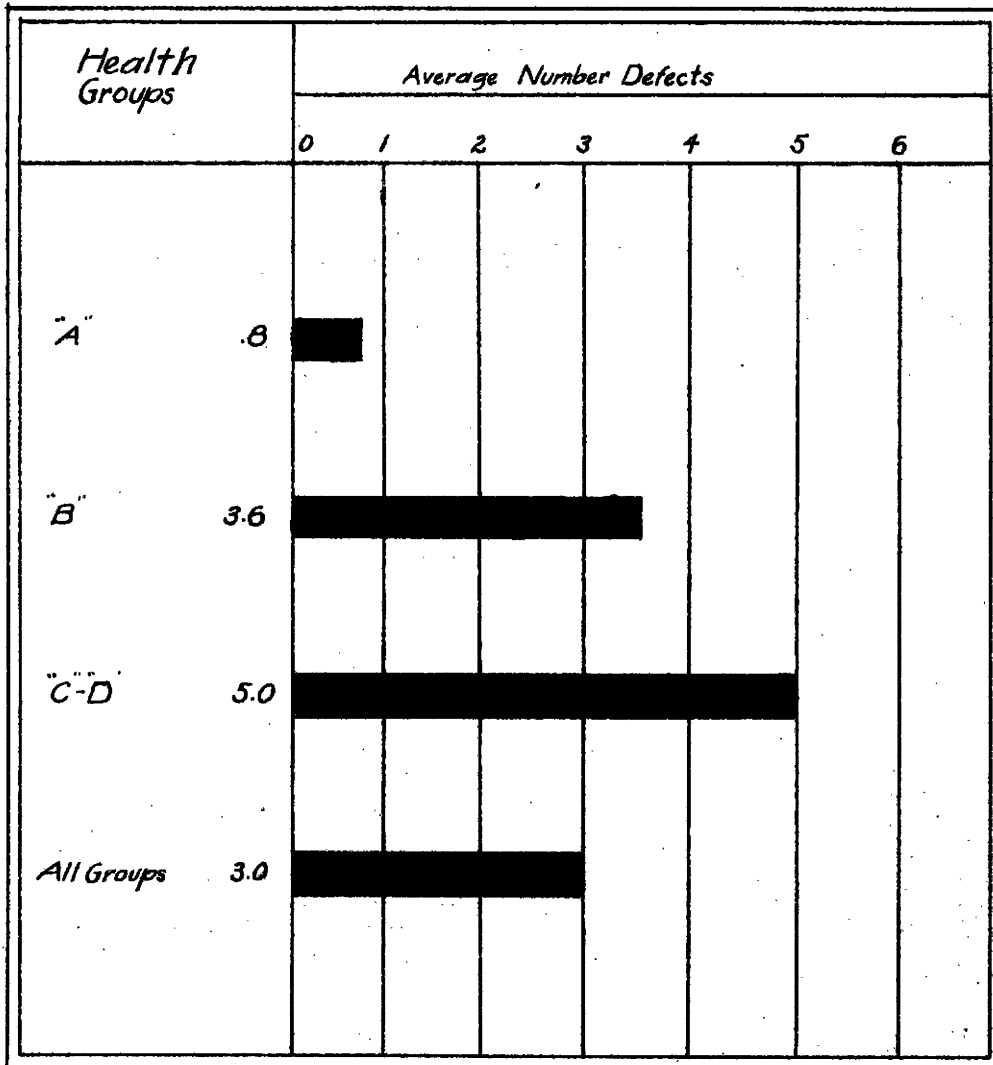


Figure 3. Average number of physical defects manifested by groups and for all groups combined of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935

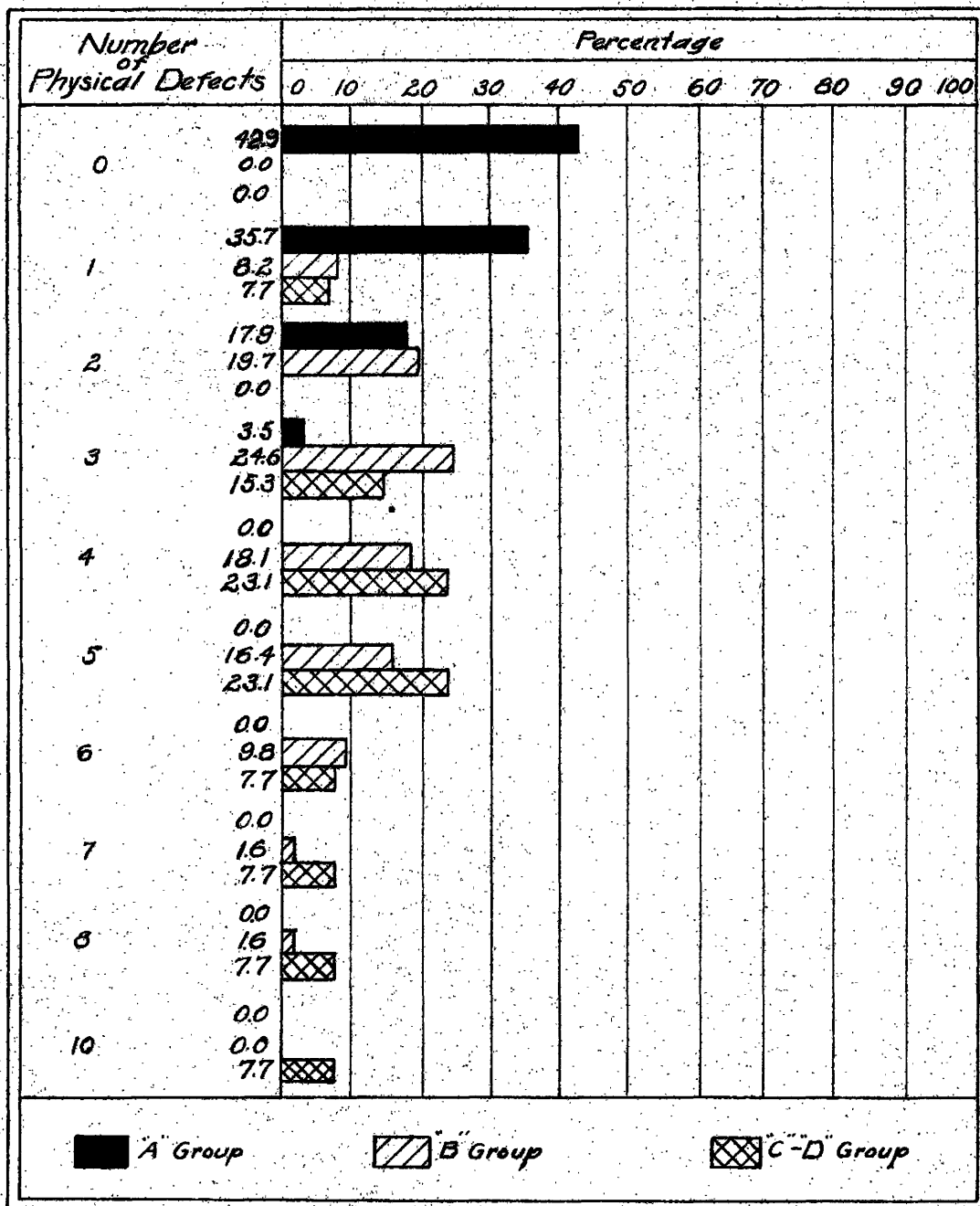


Figure 4. Percentage of children classified according to physical rating having a specified number of physical defects, Brigham City, Utah, 1935

boys tend to have more physical disorders than girls and that when the sexes are combined the average number of defects increase as the physical rating decreases.

Figures 3 and 4 should aid the reader to see the relationship between the health groups and the number of physical defects.

Child Mortality

There is slightly less child mortality in families of children who have a physical rating of "A" than in those families whose children have "B" ratings, but the disparity between either or both these groups and "C"- "D" group is considerably greater.

More than three-fourths of the families in "A" (78.5%) and "B" (75.4%) groups report no child mortality. The difference between the percentages in these two classifications is not great enough to warrant a conclusion that "A" group is freer from child deaths than "B", even though the former shows a slight advantage. But when the child deaths are considered in "C"- "D" families we find less than one-third (30.8%) with no child mortalities. As the data indicate there are more than twice as many families in "C"- "D" group who have child deaths when compared with "A" and "B" families. (Chart 5)

Eight child deaths were found in "A" group and three (37.5%) of these occurred in one family. The other 5 (62.5%) are found to be single deaths in each of five different families. From this it is evident that the family with three child deaths may unduly weight the average for the group.

In "B" group there were 22 child deaths. Four of them (18.2%) are in one family, eight (36.4%) in four families, each reporting two deaths apiece, and ten (45.4%) in families with one death each. Of the thirteen

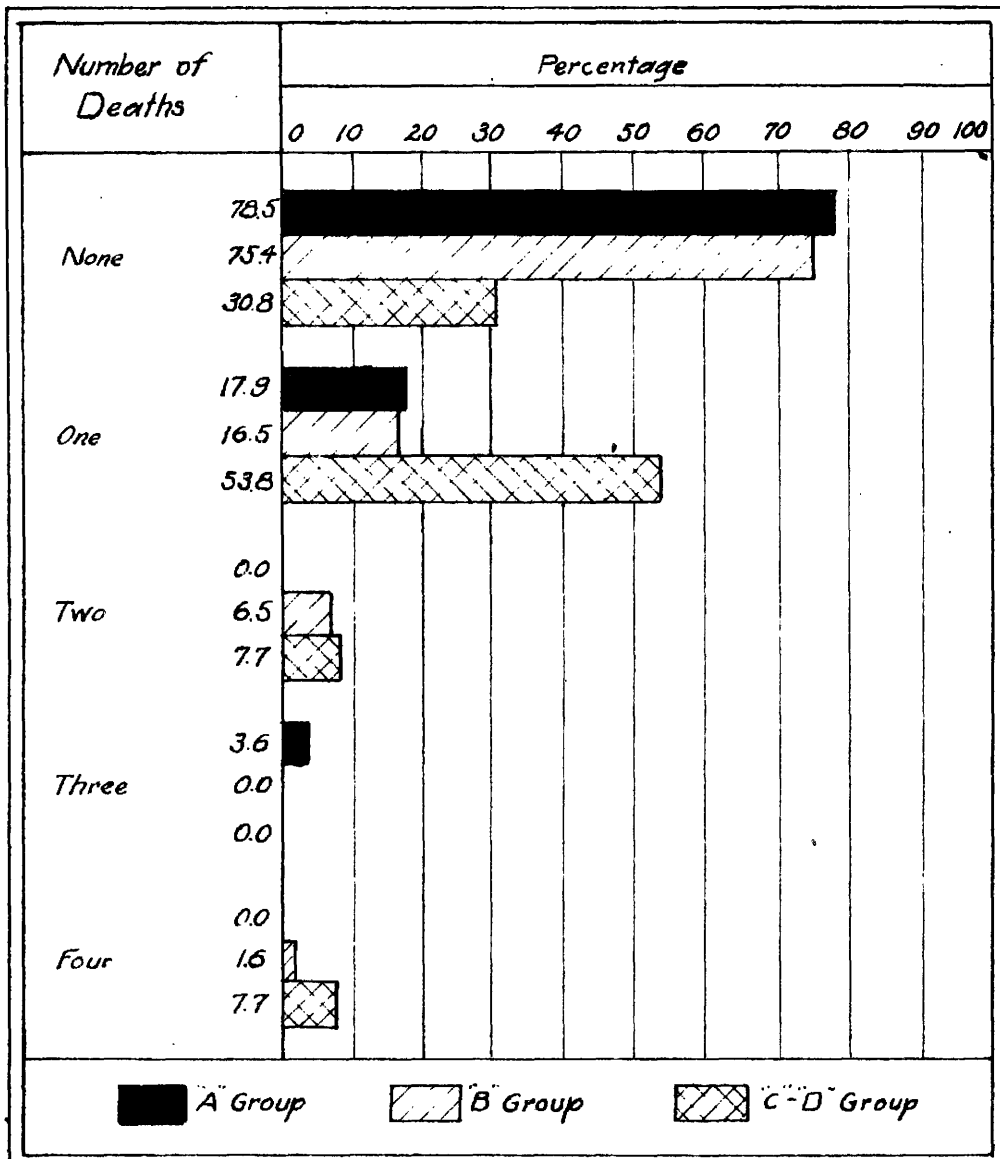


Figure 5. Percentage of families having a specified number of child deaths by groups of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935

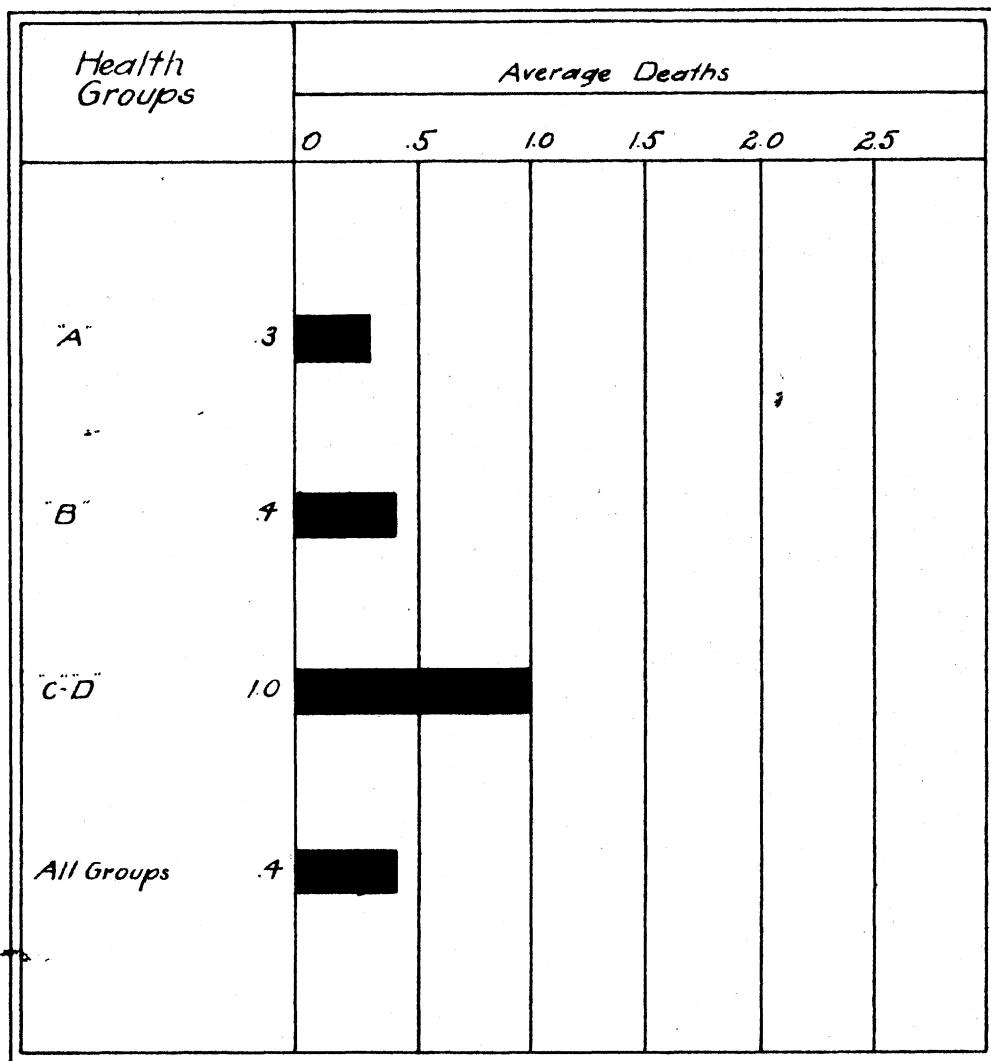


Figure 6. Average number of child deaths per family for specified groups and for all groups combined of seventh and eighth grade pupils classified according to physical rating, Brigham City, Utah, 1935

child deaths in "C"- "D" families four (30.8%) occurred in one family, 2 (15.4%) in another family, and 7 (53.8%) in families having one death each. These findings show that a greater number of deaths per family increase with a decrease in physical rating. It is also obvious that the percentage of single child deaths in families becomes less as we progress from "A" to "B" group and from "B" to "C"- "D" group. The average number of deaths per family tend to show that children with "C" or "D" health ratings have more dead brothers and sisters than children with "A" or "B" ratings. "A" group averaged .3 of a death per family, "B" group .4, and "C"- "D" group 1. The average number of child deaths per family for all groups was .4. (Figure 6)

Table 3

Number and percent of families having specified number of dead children by groups and for all groups combined of seventh and eighth grade children classified according to physical rating Brigham City, Utah, 1935-36

Groups	Number of Deaths												: Ave. : No. : Deaths
	: Total :		: 0 :		: 1 :		: 2 :		: 3 :		: 4 :		
	: No. :	: Fam's :	: No. :	: % :	: No. :	: % :	: No. :	: % :	: No. :	: % :	: No. :	: % :	
"A"	: 28 :	: 22 :	: 78.5 :	: 5 :	: 17.9 :	: 0 :	: 0.0 :	: 1 :	: 3.6 :	: 0 :	: 0.0 :	: .3 :	
"B"	: 61 :	: 46 :	: 75.4 :	: 10 :	: 16.5 :	: 4 :	: 6.5 :	: 0 :	: 0.0 :	: 1 :	: 1.6 :	: .4 :	
"C"- "D"	: 13 :	: 4 :	: 30.8 :	: 7 :	: 53.8 :	: 1 :	: 7.7 :	: 0 :	: 0.0 :	: 1 :	: 7.7 :	: 1.0 :	
Total	: 102 :	: 72 :	: 70.5 :	: 22 :	: 21.6 :	: 5 :	: 4.9 :	: 1 :	: 1.0 :	: 2 :	: 2.0 :	: .4 :	

Combining all groups, it is found that 70.5% of the families studied in Brigham City are free from child deaths; that 21.6% experienced one death; and 4.9% experienced two deaths; 1.0% three deaths and 2.0% four deaths.

Order of Birth (Table 4)

The "B" group children lead all other groups in percentage of first born children within the group. Twenty-four and six-tenths percent of the children in this group are first born. "C"- "D" comes next to "B" group with 15.4% first born and "A" group has least with 14.3% first born.

Ascending the scale to the fourth-born children "B" group children leads with 14.8%, followed by "A" group with 10.7% and "C"- "D" with 7.7%.

There are just seven study-children who are fifth-born. Six of these belong to "B" group and the remaining one is an "A" group child. "C"- "D" group has no children fifth-born. For proportion of children sixth-born "C"- "D" children claim first place with 15.4% as compared with 7.1% for "A" group and 8.2% for "B". "A" and "B" groups are the only ones having seventh-born cases and the percentages for these two are very nearly equal. Eighth-born children are found only in the "B" group, the number being three and the percent 4.9. Again for ninth-born children "B" group has the only representation with 5 children or 8.2%. Three children are tenth-born; two belong to "C"- "D" group and one to "A" group. "B" group reports no children tenth-born. Summarizing, there is a greater percentage of "A" group children either first or second born and also the smallest percentage ninth or tenth born. "C"- "D" group has relatively the same percentage of children first or second born as "A" group but for ninth or tenth born children its percentage is many times greater. (Figure 7)

Table 4

Order of birth of seventh and eighth grade children grouped according to physical rating,
Brigham City, Utah, 1935

Groups	:Total :		Order of Birth												:Average
	:No. :													:Order	
	:of :		First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	: of		
	:Chil- :												:Birth		
	:dren	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %			
"A"	: 28	: 4 :14.3:	10:35.7:	4 :14.3:	3 :10.7:	1 : 3.6:	2 : 7.1:	3 :10.7:	0 : 0.0:	0 : 0.0:	1 : 3.6:	3.4			
"B"	: 61	:15 :24.6:	4: 6.6:10	:16.4:	9 :14.8:	6 : 9.7:	5 : 8.2:	4 : 6.6:	3 : 4.9:	5 : 8.2:	0 : 0.0:	4.			
"C"- "D"	: 13	: 2 :15.4:	4:30.7:	2 :15.4:	1 : 7.7:	0 : 0.0:	2 :15.4:	0 : 0.0:	0 : 0.0:	0 : 0.0:	2 :15.4:	4.			
Total	: 102	:21 :20.6:	18:17.7:16	:15.7:13	:12.7:	7 : 6.9:	9 : 8.8:	7 : 6.9:	3 : 2.9:	5 : 4.9:	3 : 2.9:	3.9			

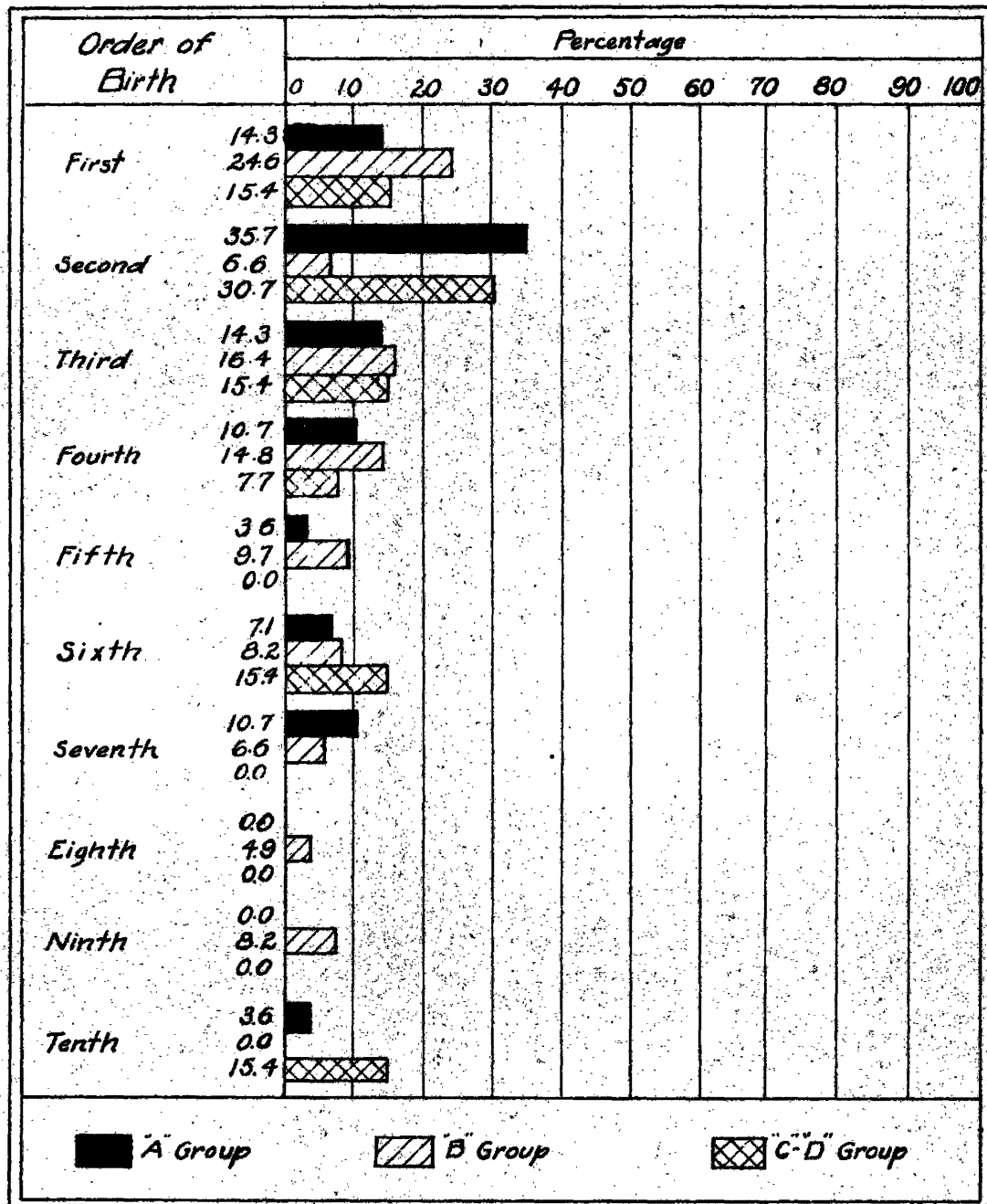


Figure 7. Percentage of seventh and eighth grade children classified according to physical rating having a specified order of birth, Brigham City, Utah, 1935

Summary on Health Section

Children with a physical rating of "A" have a smaller percentage with each physical defect than those with physical ratings of "B" or "C" or "D". Generally, though not always, "B" group has a lower percentage having each physical defect than "C"- "D" children.

No heart, nervous condition, spine, goiter, adenoids or chest defects are found to be present in "A" group children.

The following defective conditions are found to be more prevalent among girls than boys: Underweight, teeth, adenoids, tonsils, sinuses, goiter, skin and spine. Those more common among boys are: Ears, feet, posture and chest. Heart, nutrition and nervous conditions seem to be of about equal proportion between the sexes.

The five most common defects found are: Nutrition, posture, teeth, tonsils and underweight. The four defects occurring least often are: nervous condition, goiter, chest and spine.

As might be expected the average number of physical defects increase as the physical rating becomes lower. That is, children with "A" physical rating (on an average) have fewer physical defects per child than the "B" children and "B" children correspondingly have fewer than "C"- "D" pupils. Thus while seriousness of defect entered into the ratings, number of defects actually increase as the health ratings decline.

A higher percentage (78.5%) of "A" group families have had no children die than "B" (75.4%) or "C"- "D" (30.8%) group families. From these figures we see "C"- "D" families have experienced over twice as many child deaths as have either of the other two groups. Thus the higher defectiveness of those rated in the "B" and "C"- "D" groups is matched by a higher death rate among brothers and sisters.

More children with a physical rating of "A" are first or second born and fewer are ninth or tenth born than for any of the other groups. "C"-
"D" children approach "A" children rather closely with respect to first or second born but have a considerably higher percentage ninth or tenth born. As indicated by average order of birth "A" children are born earlier in relation to other children in the family than "B" or "C"-
"D" physically rated children.

Economic Background

The principal purpose of this section is to depict as vividly and accurately as possible the economic backgrounds of the children included in this study, grouped according to physical rating.

The writer recognizes that all economic factors that may affect directly or indirectly the health of children have not been included. Only those items are considered for which rather reliable data are available and which seemed most nearly connected with the problem.

The average man recognizes a relationship between health and economic status. Minimum needs of a family must be satisfied. If not, the results will manifest themselves in ways not altogether perceptible such as immorality, poor health or retarded intellectual development. Says Sand:

"Our whole material existence is governed by the resources at our disposal, and this influence extends to our intellectual life, to our morality, to our health....."

Below a certain economic level, the growth of children is retarded, health declines and disease breaks in and produces invalidism.

Apart from the influence exercised through the kind of occupation, housing and medical attention it imposes, the want of resources acts on health by causing insufficiency in food, clothing and rest". (11)

The findings of this study dealing with the relation between income of parents and health of school children are shown in table 5.

Income (Table 5)

The family heads of children with a physical rating of "C" or "D" tend to show the greatest percentage (33.3%) with less than \$500 income. In fact the "C"- "D" group of children have one-third (33.3%) of its family heads earning less than \$500 annually as compared with slightly more

(11) Sand, Ren. "Health and Human Progress" p. 191

than one-fourth (26.4%) for "B" group and less than one-sixth (15%) for "A" group. The "C"- "D" group has more than twice the percentage of its family heads in the lowest income interval (less than \$500) than does "A" group. Again for the next highest income interval (\$500-\$999) "C"- "D" family heads have most (41.7%) "B" next (39.6%) and "A" least (25%).

Three-fourths (75%) of "C"- "D" family heads earn less than \$1000 annually. "B" family heads approximate this proportion closely with 66% or about two-thirds making less than \$1000 yearly. The "A" group has considerably fewer (40%) family heads falling in these income intervals.

Whereas the modal incomes for "B" and "C"- "D" groups are located in the interval \$500-\$999, "A" group's mode is found one interval (\$1000-\$1499) higher. Slightly less than one-third^(30%) of "A" family heads have incomes within these specified limits. This represents almost twice (16.7%) as many as are found in "C"- "D" group and more than three times (9.4%) as many as in "B" group. In the \$1500-\$1999 interval the percentages of "A" (10%) and "C"- "D" (0%) make decided drops while that for "B" rises (17.1%). The fact remains, however that not as many as one-fifth earn amounts specified by these income brackets.

There are only six family heads reporting incomes from \$2000 to \$2499. Four of these belong to "B" group and one in each of "A" and "C"- "D" groups.

Of the 85 who gave information on income but three have over \$2500, and all these are from "A" group.

In the column "Average Family Income", yearly incomes of all family members have been combined. In figure 8 it will be observed that "A" group with an average family income of \$1542 has approximately a third higher yearly income than "B" group which averages \$1056 and nearly twice as high an

Table 5

Income of family head by groups and for all groups of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935-36

Groups	Total		Number and Percent Having Specified Incomes										Average				
	:No. : :Report- :ing	:Un- :known :No. : %	:Less than :\$500 : :No. : %	\$500-999		\$1000-1499		\$1500-1999		\$2000-2499		\$2500-2999		\$3000 & over		:Fam. : :Inc. : :\$:	:Per :Capita :\$:
				:No. : %	:No. : %	:No. : %	:No. : %	:No. : %	:No. : %	:No. : %	:No. : %						
"A"	: 20	: 8 :28.6 :	3 :15.0 :	5 :25.0 :	6 :30.0 :	2 :10.0 :	1 :5.0 :	0 :0.0 :	3 :15.0 :	1542 :	181 :						
"B"	: 53	: 8 :13.1 :	14 :26.4 :	21 :39.6 :	5 :9.4 :	9 :17.1 :	4 :7.5 :	0 :0.0 :	0 :0.0 :	1056 :	150 :						
"C"- "D"	: 12	: 1 :7.7 :	4 :33.3 :	5 :41.7 :	2 :16.7 :	0 :0.0 :	1 :8.3 :	0 :0.0 :	0 :0.0 :	879 :	126 :						
Total	: 85	: 17 :16.7 :	21 :24.7 :	31 :36.5 :	13 :15.3 :	11 :12.9 :	6 :7.1 :	0 :0.0 :	3 :3.5 :	1151 :	156 :						

* The heads of the two "D" group families reported \$25 and \$750 respectively as their incomes.

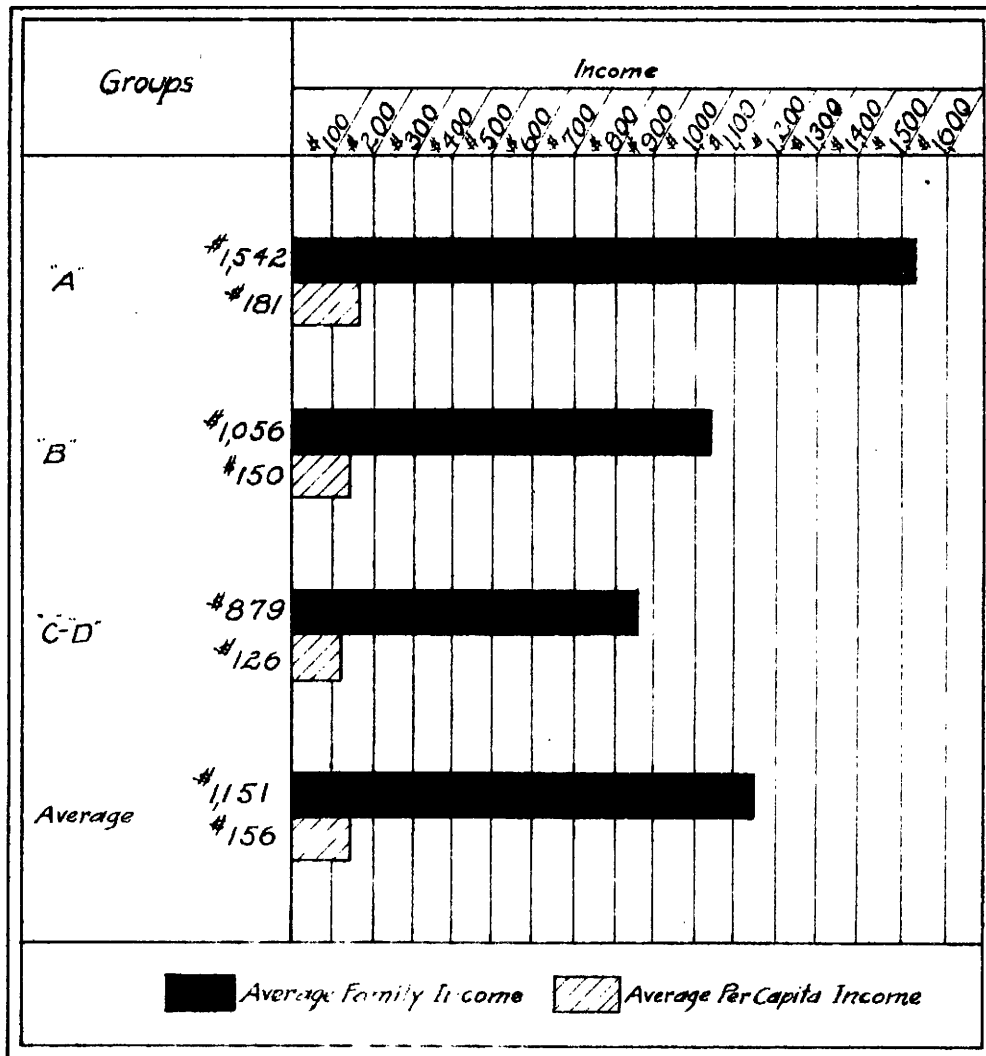


Figure 8. Average family and per capita income of families by groups and for all groups combined of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935

average as "C"- "D" group, which averages \$879.

The data on average per capita income (figure 8) of family members indicate that "A" group families have a higher income per individual (\$181) than "B" (\$150) or "C"- "D" (\$126) groups. The fact that "B" and "C"- "D" groups have slightly larger families may account for some of the difference indicated but not all. Another observation is that a greater percentage (28.6%) of "A" family heads failed to give their incomes than refused in the "B" (13.1%) or "C"- "D" (7.7%) groups. The writer knows from personal acquaintance that the largest percentage of unknowns represent family heads with relatively high incomes. It is clearly apparent that "A" group children have the greatest opportunity for securing goods and services beneficial to an adequate economic, social and health status than children in "B" or "C"- "D" groups. Furthermore, by and large, as the family incomes decrease the physical ratings of the children decrease.

Property Ownership (Table 6)

Net value of property as listed in this study, represents an estimate by a responsible family member at the time of the interview of value minus incumbrances. Here again , some people were willing to cooperate while others seemed reluctant to give the needed information. In some instances an effort was made to verify seemingly unreasonable amounts quoted by some families by contacting firms, relatives or business associates. As a result of these "cross-checks" it was disclosed that generally people report the value of their property relatively close but sometimes withhold indebtedness on property. Due and obvious reticence makes the information on property ownership less accurate than most of the other social and economic data investigated. Property ownership is given in table 6. It will be observed in this table

Table 6

Net value of property owned by families of seventh and eighth grade children
classified according to physical rating, Brigham City, Utah, 1935-36

		Net Value of Property Ownership												Average :	
		Less	\$5000	\$10,000	\$15,000	\$20,000	\$25,000	\$30,000	Value of:					Total	
		than	to	to	to	25,000	to	and	Property:					No.	
Groups :		\$5000	10,000	15,000	20,000		30,000	over	(Per					Report-	
		No. :	%	No. :	%	No. :	%	No. :	%	No. :	%	No. :	%	family)	ing
"A"		13:48.1	9:33.3	1:3.7	1:3.7	0:0.0	0:0.0	3:11.1	\$9055					27	
"B"		44:72.1	9:14.8	4:6.6	3:4.9	1:1.6	0:0.0	0:0.0	4428					61	
"C"- "D"		10:76.9	3:23.1	0:0.0	0:0.0	0:0.0	0:0.0	0:0.0	2701					13	
Total		67:66.3	21:20.8	5:5.0	4:4.0	1:1.0	0:0.0	3:3.0	5442					101	

that approximately three-fourths of the "B" (72.1%) and "C"- "D" (76.9%) families have property valued at less than \$5000, incumbrances deducted, while less than half of the "A" group families own property whose total value is less than this amount.

A considerably higher percentage (33.3%) of "A" families have property which is valued at from \$5000 to \$10,000 than is found in "B" families where less than half as high a percentage (14.8%) is found. In the "C"- "D" group a smaller percentage (23.1%) also reach this relatively high property bracket.

Approaching the property ownership interval of 10,000 to 15,000 a great decrease in percentages is evident. There are only four out of 101 (4%) families who estimate the value of their property to be between these brackets. Of these four, three are "B" group families and the other one is an "A" group family. None of the "C"- "D" families owned property which resulted in a total value of more than \$10,000.

One family in the "B" group reports property to be valued at from \$20,000 to \$25,000. No "B" family has a net value of property that exceeds \$25,000. Three (11.1%) "A" families are the only ones having property valued at \$30,000 or more. One reports net property valuation of \$30,000, one \$40,000 and a third \$50,000.

Almost two-thirds (66.3%) of the 101 families reporting property ownership list valuations of less than \$5000. Approximately seven-eighths (87.1%) have less than \$10,000 "worth" of property.

The average value of property per family in "A" group is \$9055 which is approximately twice that for "B" (\$4428) and about four times that for the "C"- "D" (\$2701) group. Figure 9 shows the relative differences between the groups with respect to net value of property.

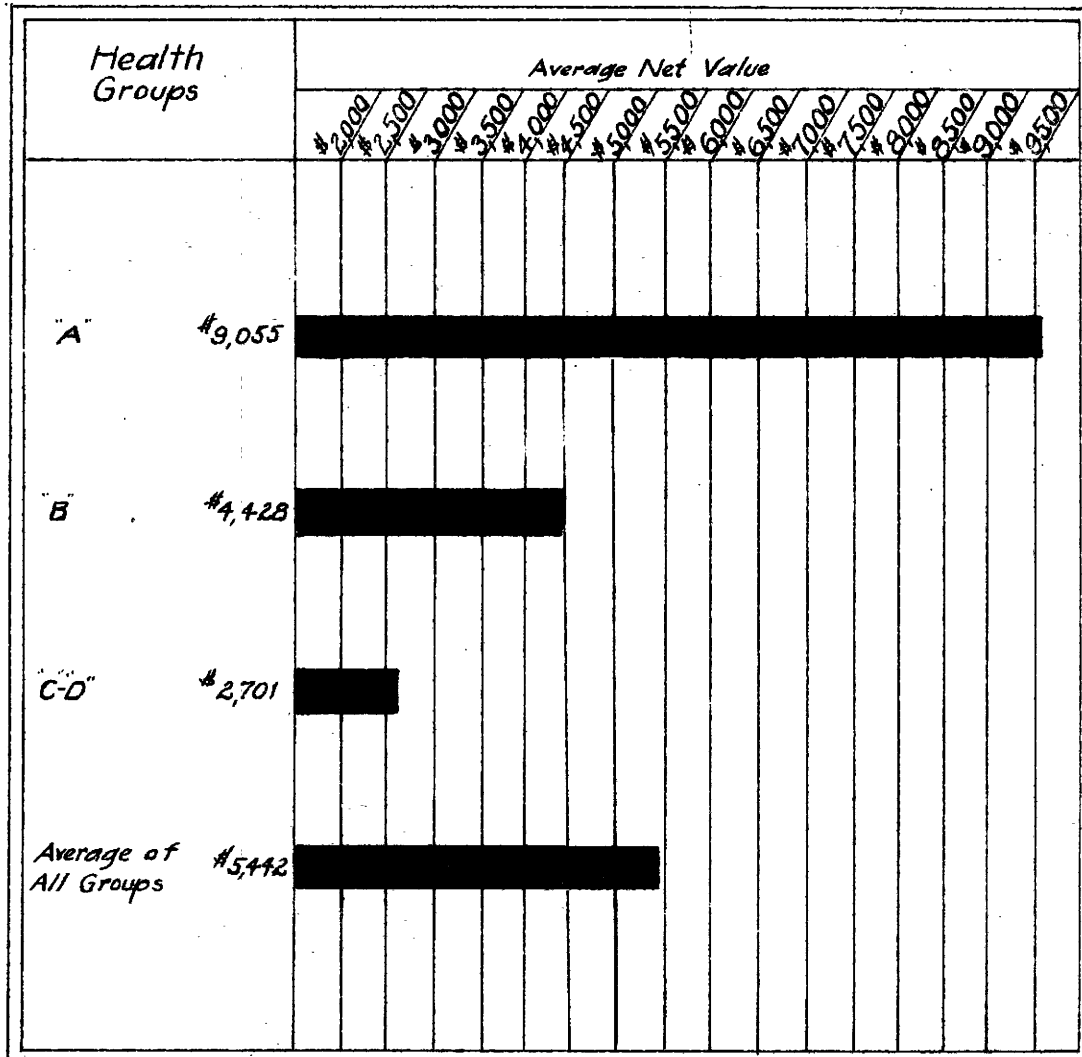


Figure 9. Average net value of property owned by families of seventh and eighth grade children classified according to physical rating in Brigham City, Utah, 1936

Occupational Status (Table 7)

Although "A" group fathers rank highest in number (25.9%) who are farm owners, "C"- "D" follows closely with 25% and "B" with 20%. Fathers having occupations that are considered professional or technical are slightly more numerous (11.1%) in "A" group, than for "C"- "D" fathers (8.3%) or "B" fathers (5.5%).

Again "proprietors, managers or officials" are found to be more prevalent in "A" group (25.9%) than "B" group (14.5%). The "C"- "D" group has no fathers belonging to this classification.

The "B" group is the only group having a representative in the "clerical and allied workers" class.

All the domestic and personal service workers belong to either "A" (3.7%) or "B" (7.3%) groups. "A" group reports no fathers as salesmen as contrasted with two (3.6%) for "B" and one (8.3%) for "C"- "D" groups. The percentages of fathers who are skilled workers are practically equal for "B" (12.7%) and "A" (11.1%) groups while no "C"- "D" fathers are skilled workers. The only two (3.6%) semi-skilled workers are "B" fathers. (Figure 10)

Fathers with no usual occupation (unskilled laborers) are most numerous in "C"- "D" group with more than half (58.3%) coming in this category. This is nearly double (27.3%) that of "B" group and more than treble (18.5%) that of "A" group.

In general, then, it may be said that the fathers of children with a physical rating of "A" are found to be more numerous in occupations that entail training. This finding is further substantiated by the lower percentage of fathers having no usual occupation in "A" group when compared with "B" and "C"- "D" groups.

Table 7

Occupational status of fathers (including step-fathers or guardians) of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935-36

Groups	Occupations												No.		
													Families		
	Total			Prof.	Proprie-							No.	Without		
	No.	Not	Farm	and	tors,	Clerical	Domestic				Sales-	Skilled	Semi-	Usual	a
	Report-	a	Owners	Tech-	and	and	Personal	man			Skilled	Occupat-	Male		
ing	Worker		nical	Officials	Workers	Service					tion	Head			
	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	
"A"	27	1 : 3.7:	7 :25.9:	3 :11.1:	7 :25.9:	0 : 0.0:	1 : 3.7:	0 : 0.0:	3 :11.1:	0 : 0.0:	5 :18.5:	1			
"B"	55	2 : 3.6:	11 :20. :	3 : 5.5:	8 :14.5:	1 : 1.8:	4 : 7.3:	2 : 3.6:	7 :12.7:	2 : 3.6:	15 :27.3:	6			
"C"- "D"	12	0 : 0.0:	3 :25.0:	1 : 8.3:	0 : 0.0:	0 : 0.0:	0 : 0.0:	1 : 8.3:	0 : 0.0:	0 : 0.0:	7 :58.3:	1			
Total	94	3 : 3.9:	21 :22.3:	7 : 7.4:	15 :16. :	1 : 1.1:	5 : 5.3:	3 : 3.2:	10 :10.6:	2 : 2.1:	27 :28.7:	8			

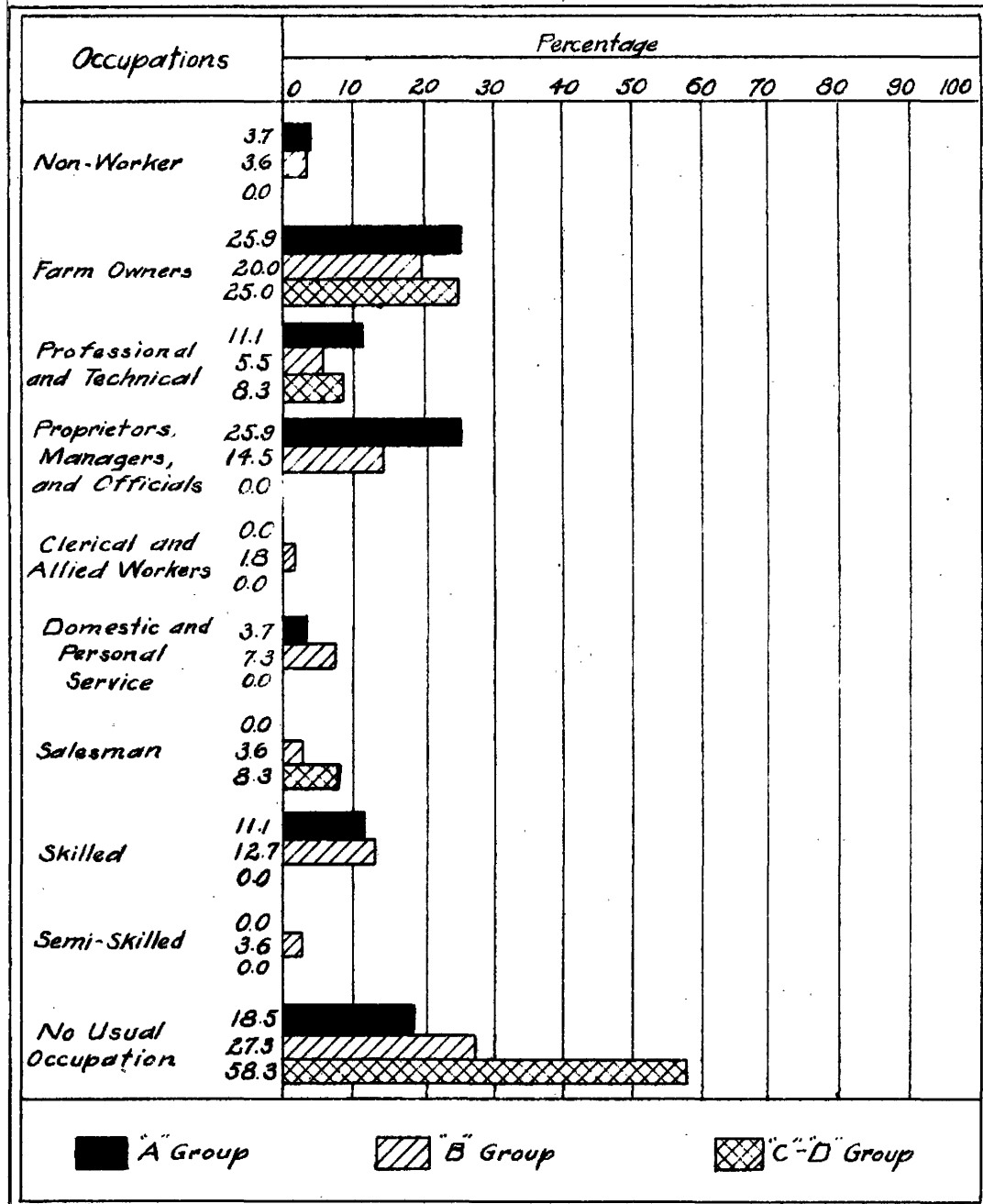


Figure 10. Percentage of fathers engaged in specified occupations by groups of seventh and eighth grade pupils classified according to physical rating, Brigham City, Utah, 1936

Arranging the occupational categories in order of greatest number of fathers belonging it is found that "no usual occupation" ranks first with 28.7%. This is closely followed by "farm owners" with 22.3%, "proprietors, managers and officials" follow with 16% and "skilled laborers" are fourth with 10.6%.

Both of the fathers of children with a physical rating of "D" had no usual occupation.

Mothers Working (Table 8)

Eventho "B" group has more families without a male head (table 7), fewest "C"- "D" mothers are employed in occupations outside the home.

In the income and property ownership tables it is shown that although "A" group has a greater family income and a greater net value of property this group has approximately twice (14.3%) as many "working" mothers as "C"- "D" (7.7%) group, and nearly three percent (11.7%) more than "B" group. (Figure 11)

These figures indicate that in families where more income could be used to advantage ^{fewest} mothers work out.

Table 8

Number and percent of mothers working (other than regular housework) by groups of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935-36

Groups	Total :No. :of :Moth- :ers	Mother			
		A		Not a	
		Worker		Worker	
		No.:	%	No.:	%
"A"	: 28	: 4	:14.3	:24	:85.7
"B"	: 60	: 7	:11.7	:53	:88.3
"C"- "D"	: 13	: 1	: 7.7	:12	:92.3
Total	: 101	:12	:11.7	:89	:88.3

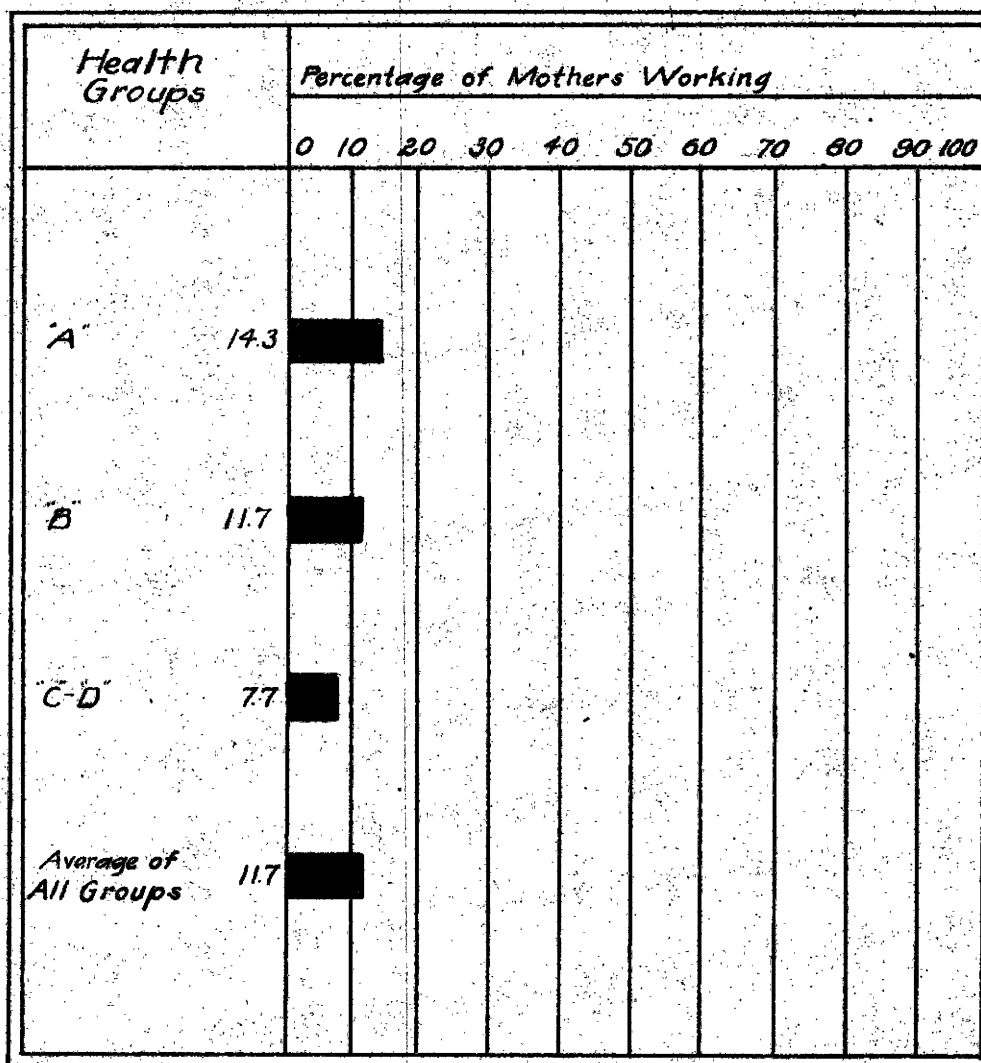


Figure 11. Percentage of mothers engaged in occupations outside the home by groups and for all groups of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1936

Bank Savings (Table 9)

Although the family income and property ownership for "A" group exceeds that for "B", the latter has a greater percentage of its family members with bank savings. None of "C"- "D" family members have bank savings.

Considering the data from the standpoint of separate family members we find that more fathers (12.8%) than children (10.3%) or mothers (7.9%) report bank savings. Eleven and one-tenth percent of "A" fathers have bank savings as compared with 16.4% for "B" fathers. Again, "B" mothers have more (11.7%) than "A" mothers (3.6%). Over twice as many "B" children (13.9%) have bank savings when compared with "A" (6.9%) children.

Totaling all family members "B" group has approximately twice (13.9%) as many with bank savings as has "A" (7.1%) group.

Table 9

Bank savings (1935) of family members of seventh and eighth grade children classified according to physical rating, Brigham City, Utah

Groups	Family Members											
	Bank Savings						No Bank Savings					
	Father	Mother	Children	Total	Father	Mother	Children	Total	Father	Mother	Children	Total
	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %
"A"	3 : 11.1	1 : 3.6	10 : 6.9	14 : 7.1	24 : 89.9	27 : 96.4	133 : 93.1	184 : 92.9				
"B"	9 : 16.4	7 : 11.7	48 : 13.9	64 : 13.9	44 : 83.6	53 : 88.3	95 : 86.1	192 : 86.1				
"C"- "D"	0 : 0.0	0 : 0.0	0 : 0.0	0 : 0.0	12 : 100.0	13 : 100.0	76 : 100.0	101 : 100.0				
Total	12 : 12.8	8 : 7.9	58 : 10.3	78 : 10.3	80 : 87.2	93 : 92.1	504 : 89.7	477 : 89.7				

Life Insurance (Table 10)

On an average only about one-third (36.5%) of all family members are insured.

About seven-tenths (70.4%) of "A" group fathers carry life insurance as compared with less than two-thirds (63.6%) for "B" group and one-half (50%)

for "C"- "D" group.

Again "A" group leads with insured mothers (39.3%), "C"- "D" mothers rank next (30.8%) and "B" mothers last (26.8%). "A" group has more (40.6%) children insured than "C"- "D" (34.2%) or "B" (29.4%) groups.

These findings indicate that life insurance is more prevalent among "A" family members, with the percentage of fathers predominating, than for the other groups.

Table 10

Insurance (life) of family members of seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935-36

Groups	Family Members							
	Insured				Not Insured			
	Father	Mother	Children	Total	Father	Mother	Children	Total
	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %	No.: %
"A"	19 :70.4:11	39.3:58:40.6	88:44.4: 8	29.6:17	60.7:85:59.4:110	55.6		
"B"	35 :63.6:16	26.8:101:29.4:152	33.2:20	36.4:44	73.2:103:70.6:167	66.8		
"C"- "D"	6 :50.0: 4	30.8: 26:34.2: 36	35.6: 6	50.0: 9	69.2: 32:65.8: 47	64.4		
Total	60 :63.8:31	30.7:185:32.9:276	36.5:34	36.2:60	69.3:220:67.1:324	63.5		

Summary of Findings on Economic Background

In general we may state that children with a physical rating of "A" come from families with the best economic status, and that children with a "B" rating have an advantage over those with "C" or "D" ratings.

First, the average and per capita income per family is greatest for "A" group with "B" group ranking next.

Second, the average value of property owned by "A" families is approximately twice that for "B" families and about four times that for "C"- "D" families.

Third, more of "A" group fathers follow occupations of the "professional

and technical", "proprietors, managers and officials" and "farm owners" types than "B" or "C"- "D" groups. More than half (58.3%) of "C"- "D" fathers have no usual occupation as compared with more than one-fourth (27.3%) for "B" group and less than one-fifth (18.5%) for "A" group.

Fourth, "A" group has the greatest percentage of mothers working outside the home; "B" comes next; and "C"- "D" group has the fewest.

Fifth, bank savings are found more frequently among "B" group family members than among "A" members. None of "C"- "D" family members are reported as having this type of savings. Only a little more than ten percent (10.3%) of all family members (all groups) were practicing this type of thrift at the time the data were collected.

Sixth, the percentage of "A" family members with life insurance (44.4%) surpasses that of "C"- "D" families with 35.6 percent which ranks next, and also "B" family members which falls slightly lowest (33.2%). The lives of fathers are more generally insured than other family members.

Housing

The primary purposes of this section are: (1) to determine the existing housing conditions of homes occupied by seventh and eighth grade school children grouped according to physical rating; (2) to point out the similarities or differences found among these groups with respect to such conditions; and (3) to contrast certain general housing conditions found in this project with those found in other studies.

The ill effects of unwholesome and inadequate housing are often subtly reflected in the health of those coming from such homes. Whether the housing factor is sufficiently determining so that when large numbers are involved it may be that with poor housing goes poor health but this is not yet known. Nor does this study attempt to find the answer except within a limited area. Quite generally health authorities find a relationship between housing and health but the difficulty of separating factors which obviously influence health is widely recognized.

"Housing has an evident relation to health. This relationship is partly intimate, but mainly indirect.

.....
"It is difficult to separate the factors of crowding, heredity, race, personal habits, poverty, diet, and other hygienic and sanitary influences from the actual housing conditions. A home...is an instrument that may be abused....A good house may be crowded and unsanitary, while a bad house may be clean and fairly adequate...." (12)

In this study the housing conditions were studied in 102 homes inhabited by seventh and eighth grade children. Twenty-eight homes were inhabited by children with "A" physical ratings, 61 with "B" ratings, 11 with "C" ratings; and 2 with "D" ratings.

Home Ownership (Table 11)

There is little disparity with respect to home ownership among the
(12) "Housing and Community Home Repair and Remodeling." The President's Conference on Home Building and Home Ownership, Washington, D. C., 1931, pp. 4-5

designated groups "A", "B" and "C"- "D". Less than three-fourths (71.4%) of the homes in "A" group; more than three-fourths (77%) in "B" group; and more than two-thirds (69.2%) of "C"- "D" group live in homes owned by their parents or guardians. "D" group, which has been combined with "C" group for purposes of comparison, reported no home ownership.

Table 11

Number and percent of home owners and tenants among: (1) groups of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935-36; (2) all groups, Brigham City, Utah; (3) Ogden FERA group, 1935; and (4) Logan FERA group, 1934

Groups	Total		Home Owners		Tenants	
	Number					
	Homes	No.	%	No.	%	
"A"	28	20	71.4	8	28.6	
"B"	61	47	77.	14	23.	
"C"- "D"	13	9	69.2	4	30.8	
City Groups						
Brigham	102	76	74.5	26	25.5	
Ogden						
FERA	139	42	30.2	97	69.7	
Logan						
FERA			41.6		58.4	

Apparently home ownership is more prevalent in Brigham City, Utah than in either of the Ogden or Logan FERA groups studied in connection with this item. On an average nearly three out of four (74.5%) of the Brigham City homes studied were owned. The Logan FERA group came next with slightly more than two out of five (41.6%). And Ogden FERA group ranked last with less than one out of three (30.2%). These comparisons indicate home ownership to be approximately twice as prevalent in Brigham City when compared with these other groups.

Even the lowest health group in Brigham City owns approximately twice as many homes as Logan or Ogden FERA groups.

In Wilmington, the largest city in Delaware, the percentage of homes owned was 45.2 in 1930. This statement is made merely to accentuate the apparent predominance of home ownership in Brigham City when compared with cities of various sizes and in different regions.

Adequacy of Space

Rooms per house (Tables 12 and 13)

"A" group has a larger proportion of houses with two or more than twelve rooms than all other groups combined. Five out of twenty-eight, or the ratio of more than one house to every six had eight rooms.

Sixty-seven and nine-tenths percent of "A" group houses, 72.6% of "B" group houses and 84.6% of "C"- "D" group houses come within a range of from 4 to 9 rooms per house. This comparison tends to indicate that the range of number of rooms per house for "A" dwellings varies to a greater extent than that for "B" or "C"- "D" dwellings. A smaller percentage of "A" houses are concentrated within this specified range than "B" houses and correspondingly a smaller percentage of "B" dwellings come within this range than "C"- "D" homes.

"A" group had an average of 8.0 rooms per house--this being 1.4 more than the average number for group "B" (6.6) and 1.6 more than for "C"- "D" group (6.4). This tends to signify that children with a physical rating of "A" have an advantage over children in the other groups with respect to number of rooms per house, assuming the size of the families to be equal.

From a study of table 12 it is readily seen that the average number of rooms per house for Brigham City homes (7.1), by rather a large margin,

Table 12

Rooms per house in homes occupied by seventh and eighth grade children, grouped according to physical rating, Brigham City, Utah, 1935-36

:Tot al:		Rooms Per House																							
:No.	:	2	:	3	:	4	:	5	:	6	:	7	:	8	:	9	:	10	:	11	:	12	:	More	:Ave.
Groups	Houses:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	No.
:	:	:No.: %	:	:No.: %	:	:No.: %	:	:No.: %	:	:No.: %	:	:No.: %	:	:No.: %	:	:No.: %	:	:No.: %	:	:No.: %	:	:No.: %	:	:No.: %	:Rooms
"A"	: 28	: 2 : 7.1:	:	:	: 4 :14.3:	2 : 7.1:	4 :14.3:	:	:	: 5 :17.9:	4 :14.3:	3 :10.7:	1 : 3.6:	1 : 3.6:	2 : 7.1:	8.0									
"B "	: 61	: 2 : 3.3:	4 : 6.6:	2 : 3.3:	10 :16.3:	9 :14.8:	15 :24.5:	8 :13.1:	4 : 6.6:	4 : 6.6:	:	:	2 : 3.3:	1 : 1.6:	6.6										
"C"- "D":	: 13	:	: 1 : 7.7:	2 :15.3:	1 : 7.7:	3 :23.1:	3 :23.1:	1 : 7.7:	1 : 7.7:	:	:	1 : 7.7:	:	:	:	6.4									
Total	: 102	: 4 : 3.9:	5 : 4.9:	8 : 7.8:	13 :12.8:	16 :15.7:	18 :17.6:	14 :13.8:	9 : 8.8:	7 : 6.9:	2 : 2.0:	3 : 2.9:	3 : 2.9:	7.1											

* Two houses had 15 rooms each and the other had 13

exceeds the averages for Ogden (5.24) and Logan (3.3) FERA groups and Plain City (all homes), (4.9).

"The average number of rooms per house in the Great Basin area is 5.5". (13)

It was disclosed in a study of housing conditions in Buffalo (1930) that (14)
7.9 was the average number of rooms per house.

The average number of rooms per house in Brigham City homes (7.1) exceeds that for Great Basin area (5.5) by 1.6 rooms. A closer correspondence is evident between the averages for Brigham City and Buffalo respectively.

Table 13

Comparison of number of rooms per house of the Brigham City group, 1935-36 with: (1) Ogden FERA, 1935; (2) Logan FERA, 1934; and (3) Plain City (all houses), 1932

Rooms per House	Average							
	Brigham		(15)		(16)		(17)	
	7th and		Ogden		Logan		Plain	
	8th Gr.		FERA		FERA		City	
	No.	%	No.	%	No.	%	No.	%
1	0	0	1	0.8	14	7.6	0	0
2	4	3.9	6	4.8	62	33.5	9	4.8
3	5	4.9	16	12.7	32	17.3	19	10.2
4	8	7.8	35	27.8	33	17.8	55	29.4
5	13	12.8	39	31.0	28	15.1	40	21.4
6	16	15.7	7	5.5	10	5.4	36	19.3
7	18	17.6	7	5.5	4	2.2	18	9.6
8	14	13.8	3	2.4	2	1.1	9	4.8
9	9	8.8	2	1.6	0	0	1	0.5
More	15	14.7	10	7.9	0	0	0	0
Total	102	100.	126	100.	185	100.	187	100.
Ave. Rooms	7.1		5.24		3.3		4.9	

- (13) "Farm and Village Housing". The President's Conference on Home Building and Home Ownership, Washington, D.C., 1931, Table 1, p.6
- (14) "Home Ownership, Income and Types of Dwellings". The President's Conference on Home Building and Home Ownership, Washington, D.C., 1931, p.80
- (15) Lilywhite, Leah P. "A Study of Children in 169 FERA Families in Ogden, Utah, 1935". M.S. Thesis, p. 33.
- (16) Fredrickson, Carmen D. "A Study of Family Conditions Among FERA People in Logan, Utah, 1934". M.S. Thesis, p. 35.
- (17) Geddes, Joseph A. "Farm Versus Village Living in Utah". Experiment Station Bulletin No. 249, 1934, p. 34.

Overcrowding (Tables 14 and 15)

The average number of persons per household is greatest in the "C"- "D" group (6.5 persons). The "A" and "B" groups have an average of 6.1 persons per household in each group.

All groups show evidence of overcrowding from the standpoint of average number of rooms per person. "A" group with an average of 1.3 rooms per person exceeds the 1 room per person standard and comes nearest approaching the 1.5 rooms per person standard. "B" and "C"- "D" groups have an average of 1.1 rooms per person.

Bedroom overcrowding is less for "A" group (2 persons per bedroom) than for the other groups. However, when this is compared with the standard of 1.5 persons per bedroom it is obvious that there is an average excess of .5 person per bedroom. The average number of persons per bedroom in "B" and "C"- "D" groups is 2.5. This exceeds the standard of 1.5 by one person per bedroom, while the average for the "A" group exceeds this standard by one-half person.

The "C"- "D" group has an average of 1.8 persons per bed while "A" and "B" groups have 1.5 each.

Table 14

Overcrowding in homes occupied by seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935-36

Groups	: Ave.		: Average No.		: Average No.		: Ave.	
	: In		: Rooms per		: Persons per		: No.	
	: House-		: Person		: Bedroom		: Persons	
	: hold		: City		: City		: per	
	: House-	: in	: ham	: Stan-	: ham	: Stan-	: Bed	
	hold	House	City	dard	City	dard		
"A"	: 6.1	: 8.	: 1.3	: 1.5	: 2	: 1.5	: 1.5	
"B"	: 6.1	: 6.6	: 1.1	: 1.5	: 2.5	: 1.5	: 1.5	
"C"- "D"	: 6.5	: 6.4	: 1.1	: 1.5	: 2.5	: 1.5	: 1.8	
Average	: 6.1	: 7.1	: 1.2	: 1.5	: 2.4	: 1.5	: 1.5	

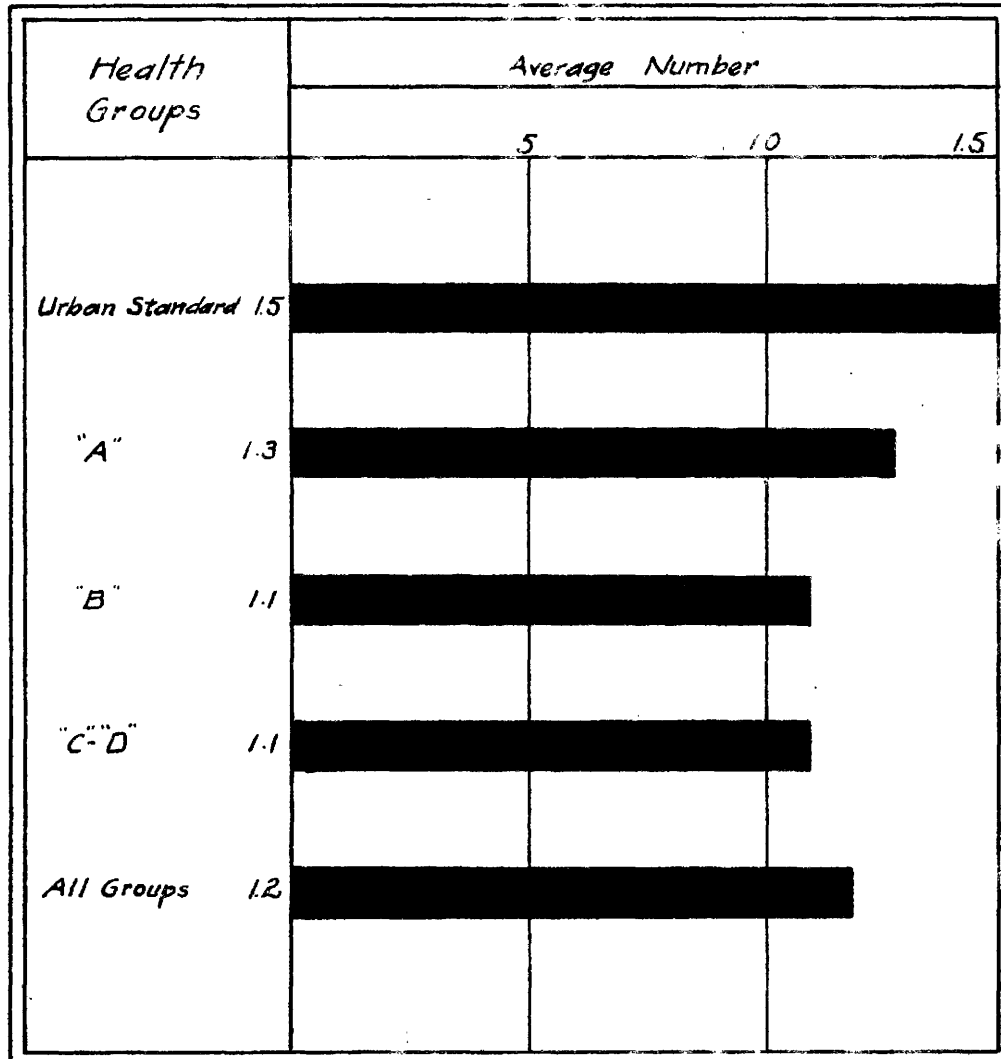


Figure 12. Average number of rooms per person by groups and for all groups of seventh and eighth grade children classified according to physical rating in Brigham City, Utah, 1935

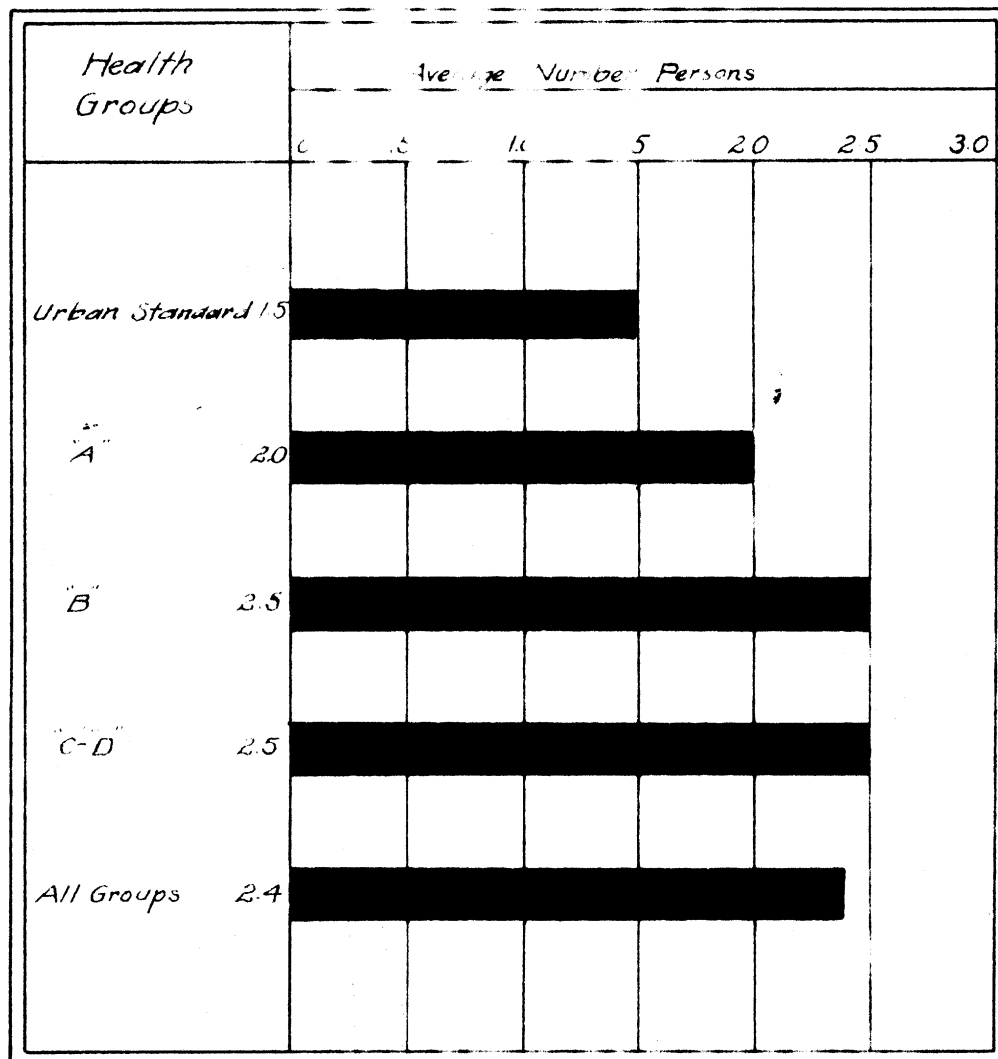


Figure 13. Average number of persons per bedroom by groups and for all groups of seventh and eighth grade children classified according to physical rating, Erieham City, 1935-36

Figures 12 and 13 indicate the extent of average number persons per room and bedroom overcrowding.

Table 15 makes it comparatively evident that overcrowding is a general condition with respect to homes in Brigham City, Plain City, and dwellings inhabited by FERA families in Logan and Ogden when compared with the more adequate standards.

With the exception of Plain City which has the fewest average number of people per bedroom (2.0), overcrowding is less serious in the Brigham City homes (2.4) and the Logan FERA (2.5) than in the homes occupied by the Ogden FERA (2.92).

As might be expected both FERA groups have an average of fewer rooms per person than either Brigham City or Plain City. The Ogden FERA group had on an average of .91 rooms per person and the Logan FERA group .82 rooms per person as compared with 1.2 rooms per person for Brigham City and 1.1 for Plain City.

Brigham City has a greater average number of persons per household (6.1) than Ogden FERA group (5.56) Logan FERA families (4.64) or Plain City (4.4). This seemingly congested condition in Brigham City is somewhat alleviated by the fact that Brigham City has an average of 7.1 rooms per house as compared with an average of less than 5.25 rooms per house in the other groups.

The Ogden FERA average for number of people per bedroom (2.92) exceeds that of the other studies. Plain City has an average of 2.0 people per bedroom, Logan FERA families 2.5 and Brigham City homes 2.4.

Table 15

House-overcrowding in: (1) homes occupied by seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935-36; (2) Ogden FERA group, 1935; (3) Logan FERA group, 1934; and (4) Plain City (all houses), 1932

	Houses			
	Occupied by	(18)	(19)	(20)
Overcrowding:	7th and 8th	Ogden	Logan	Plain
	Grades	F E R A	F E R A	City
	Brigham City:	1935	1934	1932
	1935-36			
Average				
No. People				
Per Bedroom	2.4	2.92	2.5	2.0
People per				
Household	6.1	5.56	4.64	4.4
Rooms per				
Person	1.2	.91	.82	1.1
Standard *	1.5	1.5	1.5	1.5

* Taylor, C. C. "Rural Sociology" p. 202

Age of Houses (Table 16)

Of the 19 relatively new houses (less than 20 years old) 8 were in the "A" group and 11 in the "B". The "C"- "D" group has no houses in this age interval. However, the proportion of the total number of houses in each group shows that "A" had 32 percent less than 20 years old compared with 22.4 percent less than 20 years old in "B". Although "A" has a greater proportion of newer houses (less than 20 years old) than all other groups combined, it also has the greatest proportion (28 percent) of houses over 60 years old.

Less than three-fourths (71.4%) of the abodes in "B" group, three-fifths (60%) of those in "A" and slightly more than two-fifths (41.7%) of those in "C"- "D" group are less than 40 years of age.

- (18) Lillywhite, Leah P. "A Study of Children in 169 FERA Families in Ogden, Utah, 1935". M. S. Thesis, p.34
 (19) Fredrickson, Carmen D. "A Study of Family Conditions Among FERA People in Logan, Utah, 1934". M. S. Thesis, p. 41
 (20) Geddes, Joseph A. "Farm Versus Village Living in Utah--Plain City, Utah, 1934". Experiment Station Bulletin No. 249, p. 32

Houses in "C"- "D" group have the highest average age (41.3 yrs.), "A" group the next highest (35.1 yrs.) and "B" the lowest (31.3 yrs.). The average age of houses for all the groups is 33.8 years. These relationships are brought out in figure 14.

Table 16

Age of houses compared: (1) seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935-36; (2) all groups, Brigham City, Utah, 1935-36; (3) Ogden FERA group, 1935; (4) Logan FERA group, 1934; and (5) Plain City (all houses) 1932

Groups	Years								Average Age	
	Total									of House
	No.	Under 20		20-39		40-59		60-79		in
	Houses	No.	%	No.	%	No.	%	No.	%	Years
"A"	25	8	32.0	7	28.0	3	12.0	7	28.0	35.1
"B"	49	11	22.4	24	49.0	9	18.4	5	10.2	31.3
"C--D"	12	0	0.0	5	41.7	5	41.7	2	16.6	41.3
Total	:	:	:	:	:	:	:	:	:	:
Brigham	86	19	22.1	36	41.8	17	19.8	14	16.3	33.8
Ogden (21)	:	:	:	:	:	:	:	:	:	:
FERA	96	24	25.0	47	49.0	22	22.9	3	3.1	30.1
Logan (22)	:	:	:	:	:	:	:	:	:	:
FERA	154	30	19.4	62	40.3	52	33.8	10	6.5	33.3
Plain (23)	:	:	:	:	:	:	:	:	:	:
City	180	44	24.5	60	33.3	51	28.3	25	13.9	

Percentages of Brigham City dwellings coming within specified age intervals compare relatively closely with those found in the Ogden and Logan FERA and Plain City studies. For all groups the greatest proportion of houses come within the interval 20 to 39 years of age. Brigham City has a larger portion of homes (16.3%) 60 or more years of age than any of the other places. Plain City (all homes) has 13.9 percent in this age grouping;

- (21) Lillywhite, Leah P. "A Study of Children in 169 FERA families in Ogden, Utah, 1935". M. S. Thesis, p. 26
- (22) Fredrickson, Carmen D. "A Study of Family Conditions Among FERA People in Logan, Utah, 1934. M. S. Thesis, p. 26
- (23) Geddes, Joseph A. "Farm Versus Village Living in Utah--Plain City, Utah, 1934". Experiment Station Bulletin No. 249, p. 54

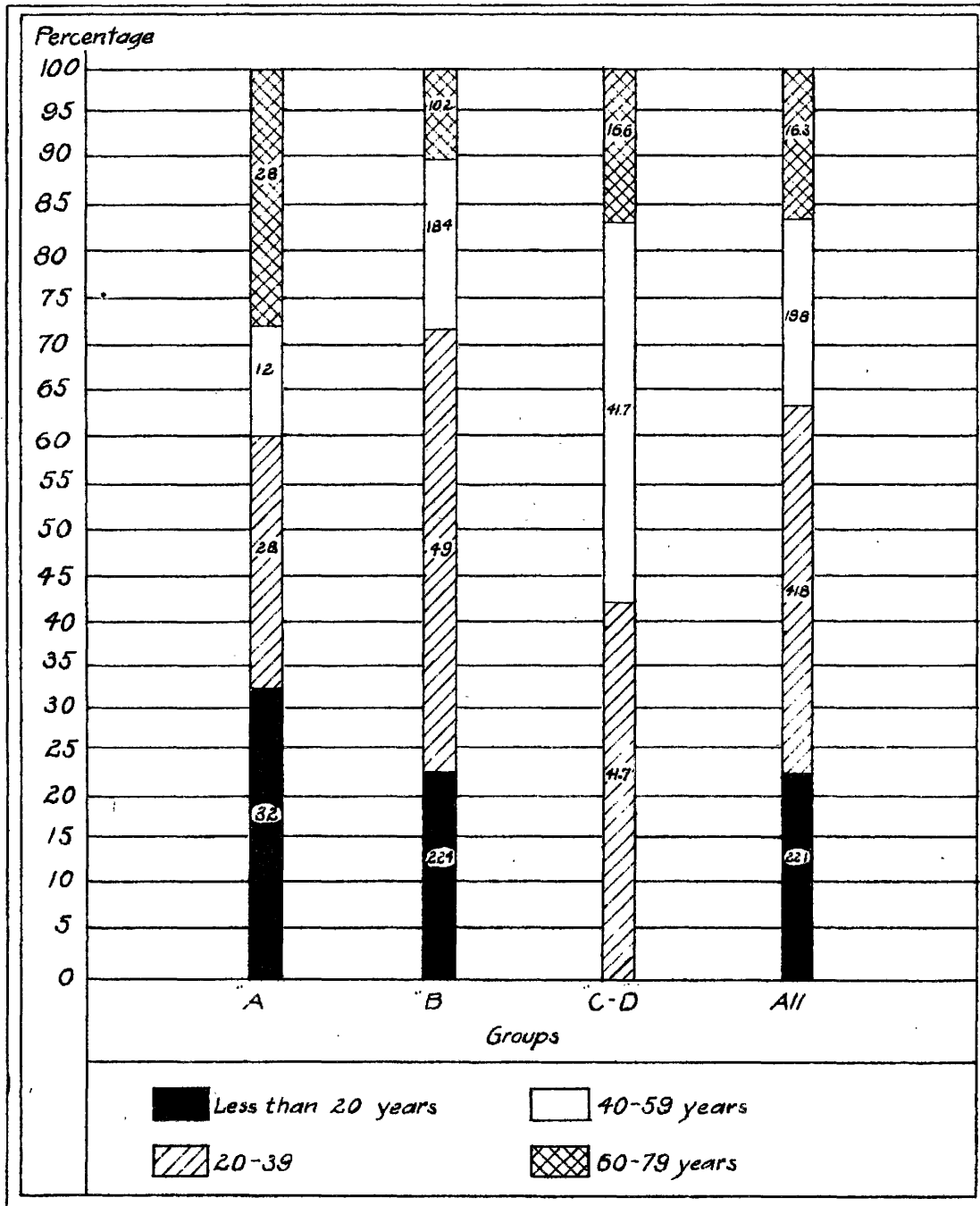


Figure 14. Percentage of houses of various ages in Brigham City, Utah, by groups of seventh and eighth grade children classified according to physical rating and for all groups, 1935-36

the Logan FERA group has 6.5 percent; and the Ogden FERA group 3.1 percent respectively.

The average age of homes for Brigham City is 33.8 years, for Logan 33.3 years and for Ogden 30.1 years.

"Houses of the New England-New York section are among the oldest in the country, 42 percent having been constructed 80 or more years ago. On an average, those of the Central East are next oldest followed by those of the Tobacco-Bluegrass and Corn Belt sections. Houses of the Great Plains and the Cotton Belt areas are newest, 60 percent and 54 percent respectively, have been built less than 20 years." (24)

None of the Utah communities compared in this section have as large a proportion of new houses as the White House Conference investigation found in the Great Plains and the Cotton Belt areas.

House Materials (Tables 17 and 18)

The data in this study show that frame houses are most prevalent for each of the groups. "A" group has more than 2 houses out of 5 (42.8%) frame; "B" more than 1 out of 2 (57.3%) and "C"- "D" group more than 1 out of 2 (53.8%). From this we may conclude that of the total number of houses reporting in each group, "B" group has the greatest proportion of its houses frame, "C"- "D" group rates next and "A" group has least of all.

"A" group, on the other hand, has more houses constructed of brick (25%) in proportion to all houses reporting than any of the other groups. Houses in "C"- "D" group trail closely with 23 percent constructed of brick while "B" has least of all with but 16.4 percent of this material.

"A" group also has a larger proportion of houses built of adobe, one-fourth (25%) of its dwellings being constructed of such material. Less than one-fifth (19.7%) of homes belonging to "B" group and less than one-sixth (15.4%) of "C"- "D" group have adobe as the basic material.

(24) "Farm and Village Housing". The President's Conference on Home Building and Home Ownership". Washington, D. C. 1931, p. 5-6

Table 17

Numbers of houses constructed of different materials occupied by seventh and eighth grade students grouped according to physical rating, Brigham City, Utah, 1935-36

Groups	Number and Percent						
	Total						
	No. Houses	Brick	Frame	Stucco	Cement	Stone	Adobe
		No. %	No. %	No. %	No. %	No. %	No. %
"A"	28	7 : 25.0	12 : 42.8	1 : 3.6	0 : 0.0	1 : 3.6	7 : 25.0
"B"	61	10 : 16.4	35 : 57.3	2 : 3.3	2 : 3.3	0 : 0.0	12 : 19.7
"C"- "D"	13	3 : 23.1	7 : 53.8	1 : 7.7	0 : 0.0	0 : 0.0	2 : 15.4
Total	102	20 : 19.6	54 : 52.9	4 : 3.9	2 : 2.0	1 : 1.0	21 : 20.6

The Brigham City study shows a smaller percentage of frame houses (52.9%) and a larger percentage constructed of adobe (20.6%) than the Ogden FERA, Logan FERA, or Plain City studies.

Table 18

Number and percentage of houses of different kinds of materials, occupied by Brigham City seventh and eighth grade children, 1935-36 compared with: (1) Ogden, FERA, 1935; (2) Logan FERA, 1934; and (3) Plain City (all homes) 1932

	Brigham : 7th&8th : Grade : Children :		(25) Ogden : FERA : :		(26) Logan : FERA : :		(27) Plain : City : :	
Materials	No. :	%	No. :	%	No. :	%	No. :	%
Frame	54	52.9	78	57.4	140	75.7	110	59.8
Brick	20	19.6	45	33.1	19	10.3	46	25.0
Cement	2	2.0	2	1.5	2	1.1	8	4.4
Adobe	21	20.6	2	1.5	6	3.2	12	6.5
Stone	1	1.0	4	2.9	4	2.2		
Other	4	3.9	5	3.6	14	7.5	8	4.4

- (25) Lillywhite, Leah P. "A Study of Children in 169 FERA Families in Ogden, Utah, 1935". M. S. Thesis, p. 31
- (26) Fredrickson, Carmen D. "A Study of Family Conditions Among FERA People in Logan, Utah, 1934". M. S. Thesis, p. 29
- (27) Geddes, Joseph A. "Farm Versus Village Living in Utah--Plain City, Utah, 1934". Logan Experiment Station Bulletin, No. 249, p. 56

The Logan FERA group has a greater percentage of frame houses (75.7%) and a correspondingly smaller percentage of brick houses (10.3%) when compared with findings in Brigham City, Ogden, and Plain City.

Assuming that brick provides the best type of material with which to construct a dwelling in this area the Ogden FERA study exhibits the greatest proportion (33.1%) of houses built of this material. If we consider frame slightly inferior to brick, Brigham City seems to be at a disadvantage with 52.9 percent constructed of this material.

Both FERA studies show a higher percentage of frame houses when compared with Brigham City and Plain City (all houses).

Conveniences

Heating (Tables 19 and 20)

Of the 15 homes having central heating systems 8 are found in the "A" group and 7 in the "B" group. All "C"- "D" group homes are heated by stoves.

More than one-fourth (28.6%) of "A" group homes as compared with more than one-tenth (11.6%) of the dwellings in "B" group have central heating systems.

From figure 15 it can be seen that stove heating predominates in all groups.

Central heating is more common in the homes of the groups studied in Brigham City than in Ogden, Logan or Plain City. Fourteen and seven-tenths percent of Brigham City houses have central heating systems, while 9.3 percent of the Ogden FERA homes, 4.9 percent of the Logan FERA homes, and .5 percent of the Plain City dwellings have central heat.

It may be observed that the prevalence of central heating systems increases with the increment of time.

Table 19

Types of heating found in homes occupied by seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935-36

Groups	Heating				
	Total		Central		
	No.		System	Stoves	*
	Homes	No.	%	No.	%
"A"	28	8	28.6	20	71.4
"B"	61	7	11.6	54	88.4
"C"- "D"	13	0	0.0	13	100.0
Total	102	15	14.7	87	85.3

* Includes ranges and heaters

Table 20

Types of heating compared in: (1) homes occupied by seventh and eighth grade children, Brigham City, 1935-36; (2) Ogden FERA group, 1935; Logan FERA group, 1934; and (4) Plain City (all houses), 1932

Localities (Average)	Kinds of Heating				
	Total				
	No.	Stoves	Gas	Central	
	Homes	Only		System	Other
	Reported	%	%	%	%
		Having	Having	Having	Having
(1936)					
Brigham City Homes	102	85.3		14.7	
(1935)					
Ogden FERA Homes (28)	139	88.5	2.2	9.3	
(1934)					
Logan FERA Homes (29)	185	95.1		4.9	
(1932)					
Plain City Homes (30)	187	97.4		.5	2.1

- (28) Lillywhite, Leah P. "A Study of Children in 169 FERA Families in Ogden, Utah, 1935". M. S. Thesis, p. 38
- (29) Fredrickson, Carmen D. "A Study of Family Conditions Among FERA People in Logan, Utah, 1934". M. S. Thesis, p. 46
- (30) Geddes, Joseph A. "Farm Versus Village Living in Utah--Plain City, Utah, 1934". U.S.A.C Experiment Station Bulletin No. 249, p. 45

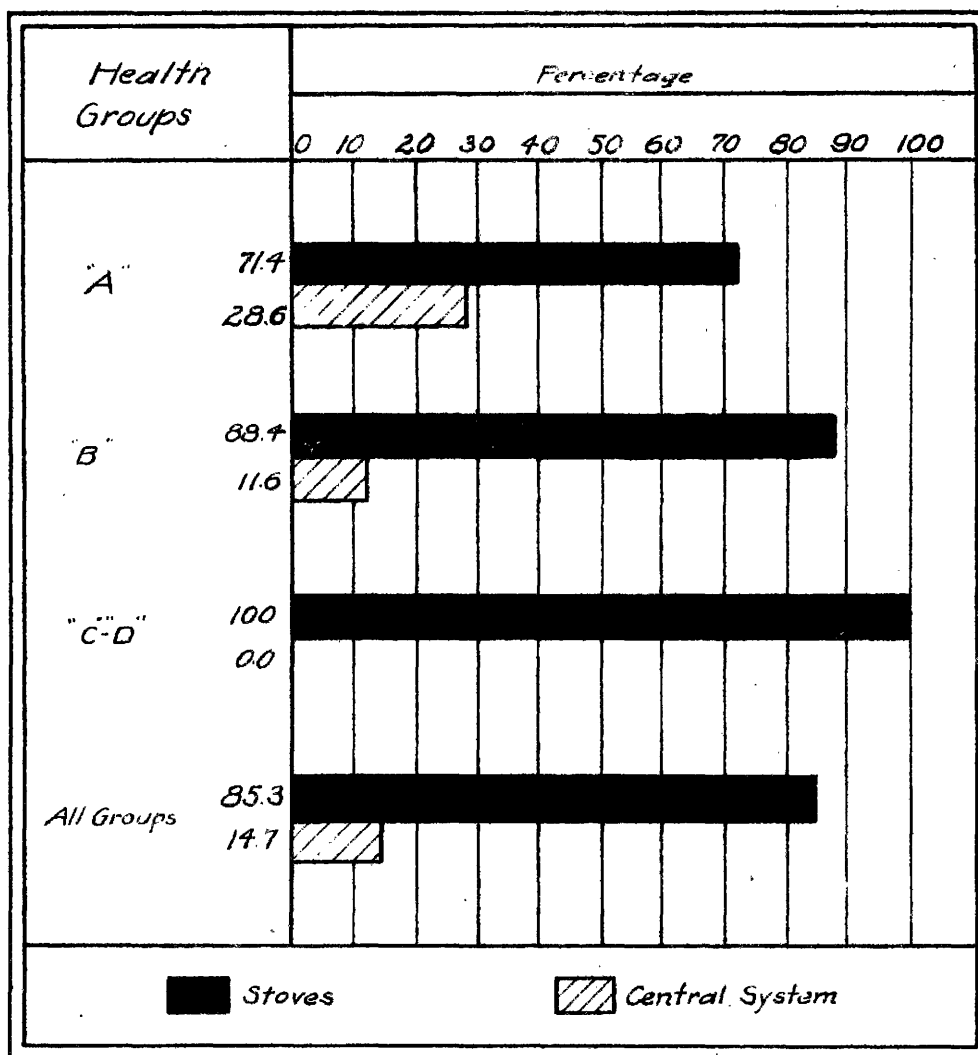


Figure 15. Percentage of homes with various types of heating, by groups of seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935-36

Bathroom Facilities

A larger proportion of homes in "A" group have each specified bathroom facility than for either of the other groups. Table 21 shows that "C"- "D" group has a greater proportion of homes with each bathroom facility than has "B" group.

In "A" group more than 4 homes out of 5 (82.1%) have a wash basin compared with less than 3 out of 5 (59%) for "B" group and slightly more than 3 out of 5 (61.5%) for "C"- "D" group.

Toilet cabinets are of the same number and percentage as wash basins for "A" group. More than three-fifths (60.7%) of "B" group homes have toilet cabinets compared with more than two-thirds (69.2%) for "C"- "D" group.

Twenty-three out of 28 (82.1%) of "A" group homes have stationary bath tubs, 37 out of 61 (60.7%) "B" group homes and 10 out of 13 (76.1%) of "C"- "D" group possess this convenience.

More than one-eighth (4 out of 28) of the homes included in "A" group have access to a shower in the house as compared with less than one-twenty-fifth (2 out of 61) for "B" group and less than one-tenth (1 out of 13) for "C"- "D" group.

Again for percentage of homes with indoor toilets "A" group excels with 82.1 percent having the convenience compared with 62.3 percent for "B" group and 69.2 percent for "C"- "D" group.

A hot water connection in the bathroom is found in more than three-fourths (78.6%) of the "A" group homes, as compared with less than two-thirds (63.6%) for the "B" group and slightly more than three-fifths (61.5%) for "C"- "D" group.

The percentage of houses with cold water connections in the bathroom exceeds that for hot water connection in all groups. Eighty-two and two-

tenths percent of "A" group, 72.7 percent of "B" group, and 76.4 percent of "C"- "D" group homes respectively have cold water connections in their bathrooms.

Table 21

Bathroom facilities in homes of seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935-36

Bathroom Facilities	Groups									
	"A"		"B"		"C"- "D"		Total			
	(28)*		(61)*		(13)*		(102)			
	No.	%	No.	%	No.	%	No.	%	No.	%
Wash Basin	23	82.1	36	59.0	8	61.5	67	65.7		
Toilet Cabinet	23	82.1	37	60.7	9	69.2	69	67.6		
Stationary Tub	23	82.1	37	60.7	10	76.1	70	68.6		
Shower	4	14.3	2	3.3	1	7.7	7	6.9		
Indoor Toilet	23	82.1	38	62.3	9	69.2	70	68.6		
Hot Water	22	78.6	35	57.4	8	61.5	65	63.7		
Cold Water	23	82.1	39	64.0	10	76.4	72	70.6		

* Indicates total number belonging to group

Basement (Table 22)

The "A" group has a higher percentage of homes with basements, 92.9 percent as against 85.2 percent for "B" group and 84.6 percent for "C"- "D" group. More than nine-tenths of the homes in "A" group have basements as compared with more than five-sixths for each of the other groups ("B" and "C"- "D").

Table 22

Number and percentage of basements in homes occupied by seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935-36

Groups	Total No. Houses	Homes with Basement	
		No.	%
"A"	28	26	92.9
"B"	61	52	85.2
"C"- "D"	13	11	84.6
Total	102	89	87.3

Refrigeration (Table 23 and figure 15)

Electric refrigeration (table 23 and figure 15) which is the most adequate means of preserving perishable foods is found in more than three-fifths (60.7%) of "A" group homes. This is almost double the percentage of homes having electric refrigerators for "B" (29.5%) and "C"- "D" (30.8%) groups.

On the other hand, ice refrigeration is more prevalent in "C"- "D" group homes, 15.4 percent as compared with 9.8 percent for "B" group and 7.1 percent for "A" group homes.

For proportion of homes without any type of refrigeration "B" group leads with three homes out of five (60.7%), "C"- "D" group follows with more than half (53.8%) and "A" group has least with less than one-third of its homes (32.2%) without refrigeration.

Summarizing, we find "A" group surpasses other groups with respect to electric refrigeration while "C"- "D" group is highest for ice refrigeration. Seventy-seven and eight-tenths percent of "A" group homes have either electric or ice refrigeration as compared with 39.3 percent for "B" group and 46.2 percent for "C"- "D" group. Of all homes included in the study, less than one-half (48%) have some type of refrigeration leaving over one-half (52%) without any kind of refrigeration.

Table 23

Types of refrigeration in homes occupied by seventh and eighth grade children, classified according to physical rating, Brigham City, Utah, 1935-36

Groups	: Total : No. : Homes	Types of Refrigeration					
		: Electric		: Ice		: None	
		: No. :	% :	: No. :	% :	: No. :	% :
"A"	: 28	: 17 :	60.7 :	2 :	7.1 :	9 :	32.2
"B"	: 61	: 18 :	29.5 :	6 :	9.8 :	37 :	60.7
"C"- "D"	: 13	: 4 :	30.8 :	2 :	15.4 :	7 :	53.8
Total	: 102	: 39 :	38.2 :	10 :	9.8 :	53 :	52.0

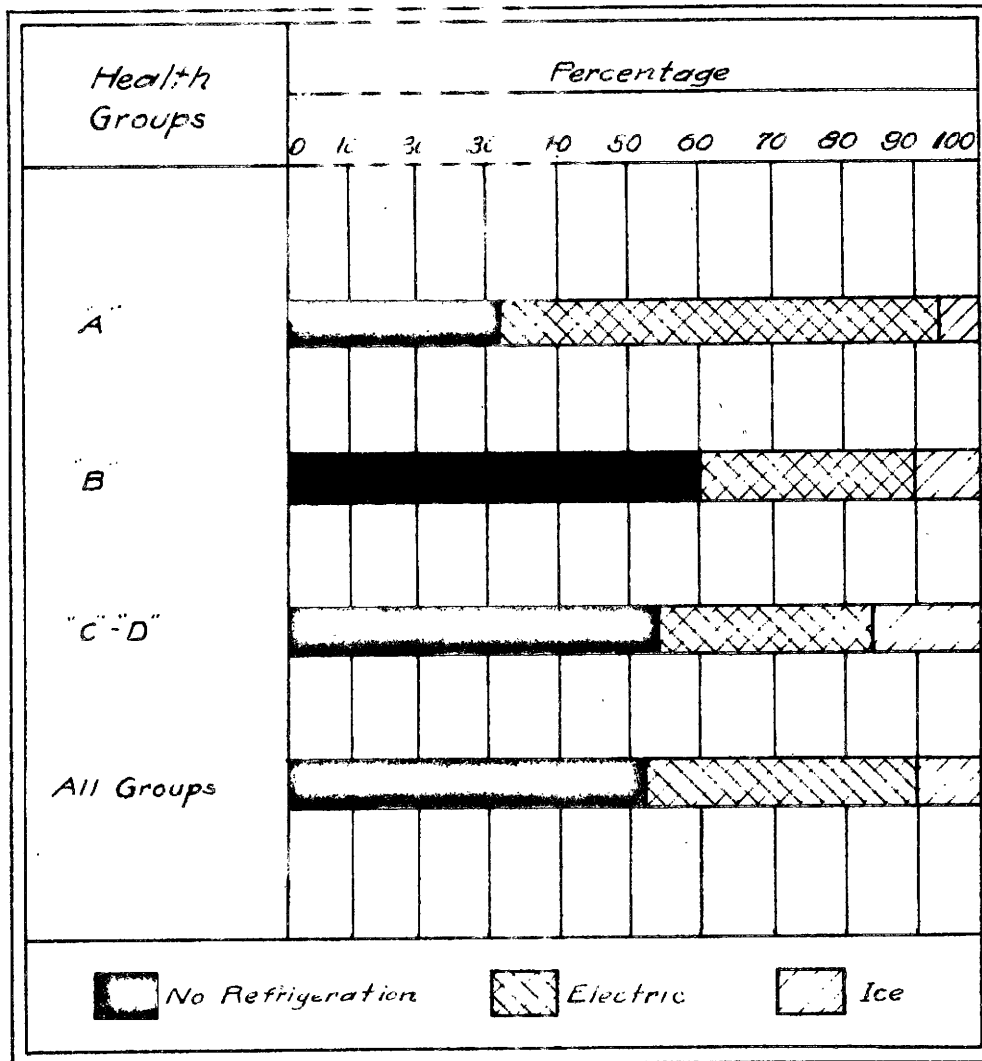


Figure 16. Percentage of homes having various types of refrigeration by groups and for all groups combined of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935-36

Washing Machine

Every home (100%) in "A" group has an electric washer (table 24). Ninety-one and eight-tenths percent of the "B" group homes have electric washing machines, 1.6 percent have some other type of washer and 6.6 percent are without a washer of any sort. More than four-fifths (84.6%) of "C"- "D" group homes report electric washers and less than one-sixth (15.4%) have no washer of any kind.

Homes in all groups report rather a high percentage with electric washers, although "A" group excels either "B" or "C"- "D" groups.

The "C"- "D" group has the highest percentage (15.4%) of homes without washers.

Electric Iron

All homes in "A" group (table 24) have electric irons as compared with 96.7 percent for "B" group and 92.3 percent for "C"- "D" group.

Electric Ranges (Table 24)

More of "A" houses are equipped with electric ranges than are "B" or "C"- "D" homes. Twenty-eight and six-tenths percent of "A" homes have electric stoves. This percentage is somewhat greater than that for "C"- "D" group with 15.4 percent or for "B" group homes with 11.5 percent of its homes equipped with electric ranges.

Hot Water Connection

More than four families out of five (82.1%) in "A" group have hot water connections (table 24). This is somewhat higher than "B" group which has slightly more than two-thirds (67.2%) of its homes equipped with this convenience. Hot water connections are found in a little more than three-fifths (61.5%) of "C"- "D" group homes.

Cold Water Connection in House

We find that more than nine-tenths of the homes (all groups) have a cold water connection in the house as shown in table 24. Ninety-six and four-tenths percent of "A" group homes, 92.3 percent of "C"- "D" group homes and 90.2 percent of "B" group houses enjoy this facility.

Water Supply

Inasmuch as Brigham City is supplied with a community water system it is not surprising to find (table 24) practically all homes connected with it. "B" group reports the only homes (2 out of 61, or 3.3%) not supplied with water from this general source.

Sewage Disposal

Brigham City's community sewerage system has been installed within the last few years, and is not accessible in every section of town (table 24). This may, in part, account for such few homes connected with a sewerage system. Considering such limitations, however, "A" group has 17.9% of its homes connected as against 7.7 percent for "C"- "D" group and 4.9 percent for "B" group homes.

The percentage of homes having cesspools or ceptic tanks for the three groups in this case are reversed. Of the "C"- "D" group homes, 84.6 percent have cesspools or ceptic tanks as compared with 77.1 percent for "B" group and 75 percent for "A" group.

Most serious, from a health standpoint, is the condition found in homes where not one of these means of sewage disposal is found (community sewerage system, cesspools or ceptic tanks). There are four homes of this type. Two of them are in "A" group and one in "B" group and one in "C"- "D" group.

The above figures on sewage disposal indicate that most homes in Brigham

City coming within this study are equipped with an adequate system of sewage disposal.

Indoor Toilet

The percentage of "A" group homes with indoor toilets (82.1%) exceeds that for "B" group (62.3%) and "C"- "D" group (69.2%). (Table 24, item 8).

It will be observed that the proportion of "C"- "D" group homes (69.2%) with this modern convenience slightly exceeds that for "B" group (62.3%).

Kitchen Sink (Table 24 Item IX)

There is little difference between the "A" and the "C"- "D" groups in provision for kitchen sinks, percentages being 89.3 percent and 92.3 percent respectively. The "B" group, however, is less well supplied reaching only 78.7%.

Bathroom (Table 24 Item X)

The "C"- "D" group homes also show a higher percentage with bathrooms (84.6%) as compared with 82.1 percent for "A" group and 65.6 percent for "B" group.

Eventho "C"- "D" group homes seem to have more bathrooms, it will be remembered from table 21 that these same homes were deficient in bathroom facilities when compared with "A" group.

Sewing Machine (Table 24 Item XI)

Electric sewing machines are found in more than one-fourth (28.6%) of "A" group homes, in more than one-tenth (13.1%) of "B" group houses, and less than one-tenth (7.7%) of "C"- "D" group homes.

When electric and other sewing machines are considered together, "B" group stands highest (100%), "A" ranks next (96.4%) and "C"- "D" lowest (92.3%).

Out of the 102 homes all but two report a sewing machine. One family in

Table 24

Certain selected modern conveniences found in homes of seventh and eighth grade children,
grouped according to physical rating, Brigham City, Utah, 1935-36

Modern Conveniences	Designated Groups								Total	Average
	"A" (28)*		"B" (61)*		"C"- "D" (13)*					
	No.	%	No.	%	No.	%				
I. <u>Washer</u>										
Electric	28	100.0	56	91.8	11	84.6	95	93.2		
Other	0	0.0	1	1.6	0	0.0	1	.9		
None	0	0.0	4	6.6	2	15.4	7	6.9		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
II. <u>Electric Iron</u>	28	100.0	59	96.7	12	92.3	99	97.1		
None	0	0.0	2	3.3	1	7.7	3	2.9		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
III. <u>Electric Stove</u>	8	28.6	7	11.5	2	15.4	17	16.7		
None	20	71.4	54	88.5	11	84.6	85	83.3		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
IV. <u>Hot Water in House</u>	23	82.1	41	67.2	8	61.5	72	70.6		
None	5	17.9	20	32.8	5	38.5	30	29.4		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
V. <u>Cold Water in House</u>	27	96.4	55	90.2	12	92.3	94	92.2		
None	1	3.6	6	9.8	1	7.7	8	7.8		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
VI. <u>Water Supply</u>										
Village System	28	100.0	59	96.7	13	100.0	100	98.0		
Private System	0	0.0	0	0.0	0	0.0	0	0.0		
Other Source	0	0.0	2	3.3	0	0.0	2	2.0		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
VII. <u>Sewage Disposal</u>										
Community Sewerage	5	17.9	3	4.9	1	7.7	9	8.8		
Cesspool or Ceptic Tank	21	75.0	47	77.1	11	84.6	79	77.5		
None	2	7.1	11	18.0	1	7.7	14	13.7		
Total	28	100.0	61	100.0	13	100.0	102	100.0		

Table 24--continued

Certain selected modern conveniences found in homes of seventh and eighth grade children,
grouped according to physical rating, Brigham City, Utah, 1935-36

Modern Conveniences	Designated Groups								Total	Average
	"A" (28)*		"B" (61)*		"C"- "D" (13)*					
	No.	%	No.	%	No.	%				
VIII. Indoor Toilet	23	82.1	38	62.3	9	69.2	70	68.6		
None	5	17.9	23	37.7	4	30.8	32	31.4		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
IX. Kitchen Sink	25	89.3	48	78.7	12	92.3	85	83.3		
None	3	10.7	13	21.3	1	7.7	17	16.7		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
X. Bathroom	23	82.1	40	65.6	11	84.6	74	72.5		
None	5	17.9	21	34.4	2	15.4	28	27.5		
Total	23	100.0	61	100.0	13	100.0	102	100.0		
XI. Sewing Machine										
Electric	8	28.6	8	13.1	1	7.7	17	16.7		
Other	19	67.8	53	86.9	11	84.6	83	81.3		
None	1	3.6	0	0.0	1	7.7	2	2.0		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
XII. Electric Sweeper	17	60.7	18	29.5	2	15.4	37	36.3		
None	11	39.3	43	70.5	11	84.6	65	63.7		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
XIII. Telephone	15	53.6	21	34.4	3	23.1	39	38.2		
None	13	46.4	40	65.6	10	76.9	63	61.8		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
XIV. Radio	27	96.4	54	88.5	12	92.3	93	91.2		
None	1	3.6	7	11.5	1	7.7	9	8.8		
Total	28	100.0	61	100.0	13	100.0	102	100.0		
XV. Automobile	23	82.1	37	60.6	7	53.8	67	65.7		
None	5	17.9	24	39.4	6	46.2	35	34.3		
Total	28	100.0	61	100.0	13	100.0	102	100.0		

* Total Number Belonging to Group.

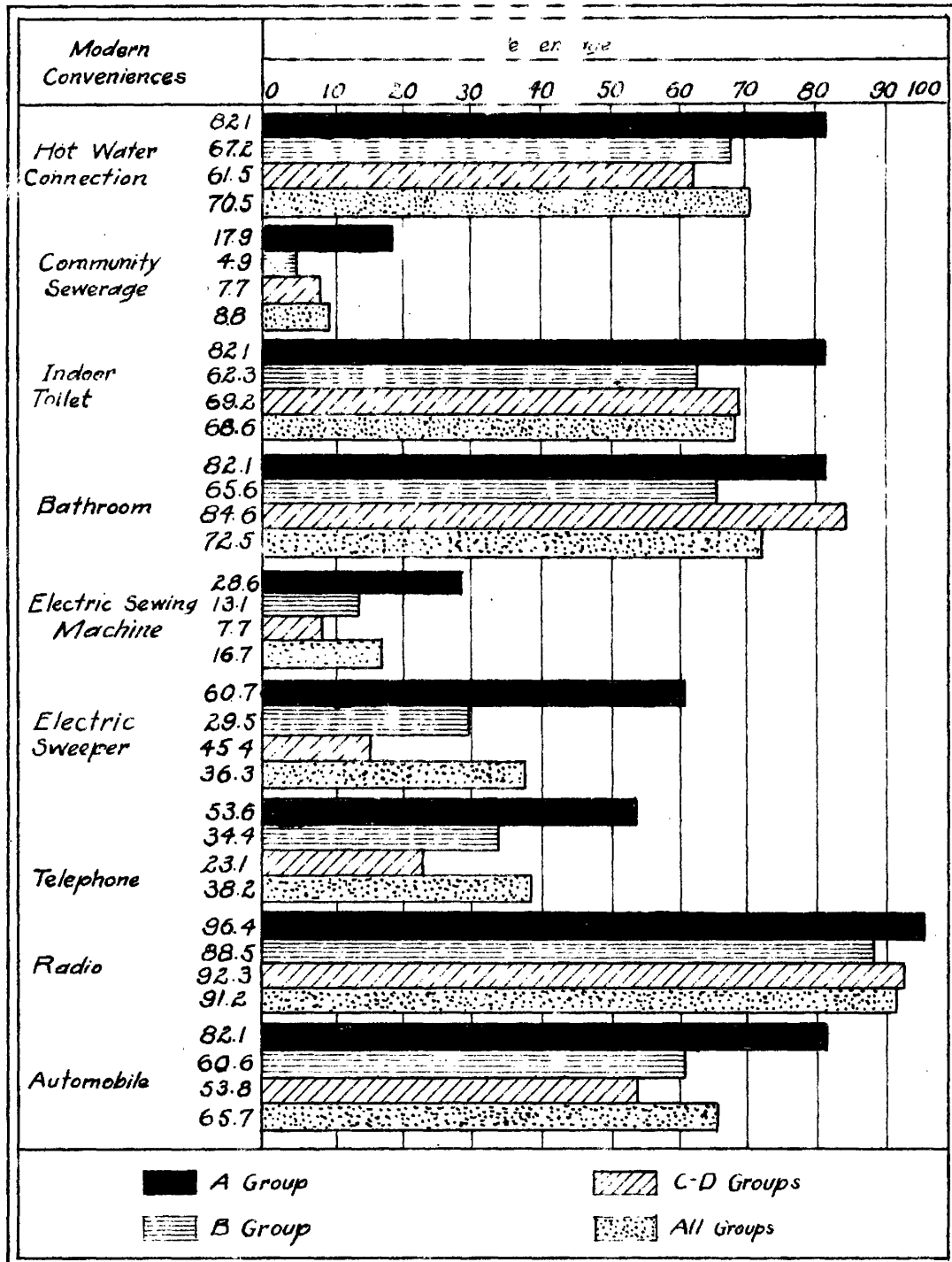


Figure 17. Percentage of homes in Brigham City having selected modern conveniences, classified according to physical rating of seventh and eighth grade pupils 1935-36

"C"- "D" group are without a sewing machine.

Electric Sweeper (Table 24 Item XII)

The percentage of homes with electric sweepers was higher for "A" group (60.7%), next for "B" group (29.5%), and lowest for "C"- "D" group (15.4%).

It may be noted that 17 (45.9%) out of the 37 sweepers for all groups are owned by "A" group homes, 18 (48.6%) by "B" (a larger group) and 2 (5.6%) by "C"- "D" group.

Telephone (Table 24 Item XIII)

Over half (53.6%) of "A" group homes have the telephone installed as compared with approximately one-third (34.4%) for "B" group, and less than one-fourth (23.1%) for "C"- "D" group.

Radio (Table 24 Item XIV)

A higher percentage of families in "A" group (96.4%) enjoy a radio than for either "C"- "D" (92.3%), or "B" (88.5%) groups.

From this it will be seen that over nine-tenths (91.2%) of the homes (all groups) are members of the "radio world". This is much above the state average which was 72.7 percent in 1935.

Automobile (Table 24 Item XV)

Whether or not automobiles are a luxury or a necessity over four-fifths (82.1%) of "A" group families own one as compared with approximately three-fifths (60.6%) for "B" group, and a little more than half (53.8%) for "C"- "D" group.

Considering all modern conveniences except two--kitchen sink and bath-room, "A" group homes are better supplied than "B" or "C"- "D" groups.

In these two instances it was homes in "C"- "D" group that outrated the "A" and "B" groups. In no instance did "B" homes excel "A" homes.

Figure 17 indicates the prevalence of certain modern conveniences in the group.

A Comparison of Home Conveniences Found in Brigham City, Ogden FERA, Logan FERA and Plain City Homes (Table 25)

Table 25

A Comparison of certain Utah communities and groups with respect to selected conveniences in homes

Modern Conveniences:	(31)				(32)				(33)	
	Brigham City		Ogden		FERA: Logan		FERA: Plain City			
	Boxelder Co.		Families		Families		(all homes)			
	1935-36		1935		1934		1932			
	No.	%	No.	%	No.	%	No.	%		
Running Water	101	99.0	130	92.9	118	63.8	112	61.5		
Indoor Toilet	70	68.6	104	77.0	73	39.5	9	4.9		
Electric Lights	100	98.0	131	93.6	182	98.4	163	89.6		
Electric Washer	95	93.2	88	63.8	117	63.2	143	78.5		
Electric Iron	99	97.1	112	80.0	156	84.3	153	84.1		
Vacuum Sweeper	37	36.3	34	24.5	16	8.6	66	36.3		
Telephone	39	38.2	17	12.3	10	5.4	38	26.6		
Piano	43	42.2	30	21.6	26	14.1	57	31.3		
Automobile	67	65.7	46	33.6	51	27.6	141	77.5		
El. Refrigerator	39	38.2	4	2.9	2	1.1	2	1.1		
Ice Refrigerator	10	9.8	45	32.6	11	5.9	5	2.7		
El. Sew. Machine	17	16.7	16	11.7	13	7.0	5	2.7		
Electric Plate	38	37.3	22	15.7	10	5.4	32	17.6		
Sink	85	83.3	102	85.7	89	48.0	119	65.4		
Hot Water	72	70.6	88	62.9	71	38.7	16	8.8		
Radio	93	91.2	99	71.2	86	50.3	84	46.2		

- (31) Lillywhite, Leah P. "A Study of Children in 169 Families in Ogden, Utah, 1935". M. S. Thesis, p. 40
- (32) Fredrickson, Carmen D. "A Study of Family Conditions Among FERA People in Logan, Utah, 1934". M. S. Thesis, p. 47, 49, 51
- (33) Geddes, Joseph A. "Farm Versus Village Living in Utah--Plain City, Utah, 1934". U. S. A. C. Experiment Station Bulletin No. 249, p. 60

Running Water

A greater percentage of families have running water in Brigham City (99%) than in Ogden (92.9%) and Logan (63.8%) FERA groups or in Plain City (61.5%).

Indoor Toilet

The Ogden FERA group has a greater percentage of homes with indoor toilets (77%) than Brigham City (68.6%), Logan FERA group (39.5%) or Plain City (4.9%). The high percentage for Ogden FERA homes may be accounted for by the fact that more families live in apartments and the congestion of houses makes out-door toilets relatively impossible. In Plain City the absence of a community water system, makes indoor toilets costly.

Electric Lights

Brigham City homes are nearly all equipped with electric lights (98%). The other groups under comparison have approximately nine-tenths of their homes with this convenience.

Electric Washer

The percentage of homes with electric washers in Brigham City is 93.2%, in Plain City 78.5%. Both exceed that of Ogden FERA group which has 63.8% and Logan FERA which has 63.2%.

Electric Iron

Again we find the prevalence of electric irons in Brigham City homes greater than for other groups. More than nine homes out of ten (97.1%) in Brigham City own electric irons as compared with 4 out of 5 (80%) for Ogden FERA group, slightly more than 4 out of 5 (84.3%) for Logan FERA and Plain City (84.1%) groups.

Vacuum Sweeper

Brigham City and Plain City report identical percentages with respect to vacuum sweepers in their homes (36.3%) which is approximately four times as many as are possessed by Logan FERA families (8.6%). Data pertaining to Ogden FERA group shows 24.5 percent of its families having this appliance.

Telephone

Brigham City has approximately 3 times (38.2%) as many telephones installed in its homes as the Ogden FERA group (12.3%). Slightly more than one-fourth of Plain City (26.6%) families have private access to this utility. Logan FERA has only 5.4 percent of its homes equipped with a telephone.

The percentage of Brigham City homes with a piano (42.2%) is practically double that for Ogden FERA families (21.6%) and treble that for Logan FERA families (14.1%). The percentage for Plain City homes (31.3%) comes nearest approaching that for Brigham City.

Automobile

Plain City has more automobiles in proportion to its families than any of the other groups. Approximately three-fourths (77.5%) of her citizens have automobiles as compared with less than two-thirds (65.7%) for Brigham City, more than one-third (33.6%) for Ogden FERA families, and a little more than one-fourth (27.6%) for Logan FERA families.

Refrigeration (Electric and Ice)

Brigham City has the greatest percentage of homes with electric refrigerators (38.2%). This is more than thirteen times that for Ogden (2.9%) and slightly less than thirty-five times that for Logan (1.1%) and Plain City (1.1%).

More families have ice refrigeration in the Ogden FERA group than in any of the others.

When considering both types of refrigeration approximately one out of two (48%) homes in Brigham City have one type or the other, more than one out of three (35.5%) in Ogden FERA families are likewise provided for, whereas only one out of twenty (6%) in the Logan FERA group, and less than one out of thirty (3.8%) in Plain City have either type of refrigeration.

Electric Sewing Machine

Brigham City has the highest percentage of homes with electric sewing machines (16.7%), next in order is Ogden FERA group with (11.7%), then comes the Logan group with 7 percent and last is Plain City with 2.7%.

Electric Plate

Electric plates are twice as numerous among Brigham City families (37.3%) as among Ogden FERA families (15.7%) or Plain City (17.6%) families. Logan FERA homes have only 5.9 percent with electric plates, which is much less than that for any of the three other groups.

Sink

A slightly higher percentage of FERA families in Ogden have sinks (85.7%) than in Brigham City families (83.3%) or in Logan FERA homes (48%) or in Plain City homes (65.4%).

Hot Water Connection

Again Brigham City homes have 70.6 percent with hot water connections, Ogden FERA group reaches 62.9 percent. Less than two-fifths of Logan FERA homes and less than one-tenth of Plain City homes have this hot water convenience.

Radio

Twenty percent more of the families in Brigham City own radios (91.2%) than in the Ogden FERA group (71.2%). As against nine-tenths of Brigham City homes having radio, less than three-fourths (71.2%) have them in Ogden FERA homes and about one-half in Logan (50.3%) and Plain City (46.2%) groups.

Reading Facilities

Table 26

Reading facilities in homes of seventh and eighth grade children, grouped according to physical rating, Brigham City, Utah, 1935-36

Groups	<u>Books</u>			<u>Magazines</u>		<u>Newspapers *</u>	
	Total	Total	Average	Total No.	Average	Total	Average
	Number	No.	Number	sub-	Number	No. sub-	Number
	of	in	per	scribed	per	scribed	per
	Families	Home	Home	for	Home	for	Home
"A"	28	3952	141.1	85	3	46	1.6
"B"	61	7737	126.8	154	2.5	86	1.4
"C"- "D"	13	513	39.5	9	.7	15	1.2
Average	102	12202	119.6	248	2.4	147	1.4

* All newspapers were daily except for one published semi-weekly.

Books

Both the "A" group with 141.1 books per home and the "B" group with 126.8 books per home have considerably more books per home than the "C"- "D" group which has 39.5 books.

Magazines

The "A" families average 3 magazines per home as against 2.5 for "B" homes and .7 of one magazine for "C"- "D" homes.

Newspapers

All groups have an average of more than one newspaper per home.

"A" group has access to an average of 1.6 newspaper per home, "B" group .14 and "C"- "D" group 1.2.

The average number of books, magazines and newspapers per home decreases as the physical condition of children declines as indicated by the "A", "B" and "C"- "D" classifications.

Summary on Housing

Home ownership and tenancy as found among "A", "B" and "C"- "D" groups shows little variation even though "B" group has a slightly higher percentage of homes owned.

In Brigham City homes a greater percentage are owned (74.5%) than in the Ogden (30.2%) or Logan (41.6%) FERA groups.

The data reveal "A" group homes have an average of more rooms per house (8.0) than does "B" (6.6) or "C"- "D" (5.0) group homes.

Brigham City has an average of more rooms per house (7.1) than is found for Ogden FERA homes (5.24), Logan FERA homes (3.3), or Plain City homes (4.9).

The "A" group has a greater percentage of the more recently built homes, less than 20 years of age, while also having the greatest number (28%) of old dwellings 60 years old or over. "B" group has a larger proportion (71.4%) of its homes less than 40 years old as compared with "A" (60%) and "C"- "D" (41.7%) groups. The average age of homes in "B" group (31.3 years) is somewhat lower than for "C"- "D" (41.3 years) group, but compares rather closely with that of "A" group (35.1 years).

Brigham City has 16.3 percent of its homes from 60 to 79 years of age. Plain City comes nearer approaching this figure (13.9%) than Ogden FERA (3.1%) or Logan FERA homes (6.5%). Percentages of Brigham City dwellings coming within the other specified age intervals compare relatively closely with those found in Ogden and Logan FERA and Plain City studies.

"A" group has the highest percentage of homes constructed of brick and also the highest percent made of adobe when compared with the other groups. Approximately half of the houses were frame in Brigham City.

Brigham City has a higher percentage of adobe houses and the smallest percentage of frame houses when compared with Ogden and Logan FERA and Plain City homes.

The FERA groups rate considerably lower than Brigham City and Plain City with respect to proportion of brick dwellings.

Overcrowding is a condition found in every group in Brigham City; however, it is greater for "B" and "C"- "D" group than for "A" group.

It is comparatively evident that overcrowding is a general condition with respect to homes in Brigham City, Plain City, and dwellings occupied by FERA families in Logan and Ogden when compared with a satisfactory standard.

Central heating systems are more common in "A" group homes (28.6%) than in "B" (11.6%) or "C"- "D" (0) group dwellings. All other homes are heated with stoves of which "C"- "D" homes lead with 100 percent.

Brigham City has fewer homes heated by stoves and more heated by a central system (14.7%) than homes in Ogden (9.3%) and Logan (4.9%) FERA groups or Plain City (.5%).

Each bathroom facility is available in a greater percentage of homes in "A" group than for either of the other groups. One notes a greater percentage of "C"- "D" bathrooms with each facility than "B".

Basements are most prevalent in "A" group homes (92.9%) but more than four-fifths of the homes in "B" (85.2%) and "C"- "D" groups (84.6%) have the same convenience.

Electric refrigeration is more frequently found in "A" group homes, and ice refrigeration in "C"- "D" group homes. More than three-fourths (77.8%) of "A" group homes have either electric or ice refrigeration as compared with less than half (46.2%) for "C"- "D" group and less than two-fifths (39.3%) for "B" group homes.

The percentage of homes with electric washers is high for all groups, although "A" group (100%) excels either "B" (91.8%) or "C"- "D" (84.6%) groups.

Electric irons are found to be slightly more prevalent in "A" group homes (100%) homes than in "B" (96.7%) or "C"- "D" (92.3%) groups, although all groups show high percentages.

Again "A" group homes excel all other groups in the proportion of houses equipped with electric stoves.

Hot water connections in houses occur more frequently in "A" group (82.1%) dwellings, while "B" (67.2%) and "C"- "D" (64.5%) groups compete closely for second place.

Although "A" group homes have a small margin over other groups with respect to percentage of homes with a cold water connection in the house, more than nine-tenths of the homes (all groups) enjoy this same facility.

But two homes out of all included in this study are not connected with the village water system. Both of these homes were in the "B" group.

More "A" group homes were connected with the community sewerage system than all other groups combined. The "C"- "D" group has the greatest percentage of houses equipped with ceptic tanks or cesspools as a means of waste disposal. There were but four homes without one or the other of the above mentioned systems: two in "A" group, one in "B" and one in the "C"- "D" group.

Most of the Brigham City homes have a supposedly adequate means of sewage disposal.

Indoor toilets are approximately 20 percent more frequently found in "A" group houses (82.1%) than in "B" (62.3%) and "C"- "D" (69.2%) group homes.

The "C"- "D" group dwellings have the greatest proportion (92.3%) of homes equipped with kitchen sinks. "A" group comes next (89.3%) and "B" group last (78.7%).

Bathrooms are more common in homes of the "C"- "D" group.

Approximately one-fourth (28.6%) of "A" group homes, one-eighth (13.1%) of "B" and less than one-tenth (7.8%) of "C"- "D" group homes have an electric sewing machine.

The percentage of electric sweepers in "A" group (60.7%) is more than double that of "B" group (29.5%) and approximately treble that of the "C"- "D" group (15.4%).

Telephones are found in a greater proportion of "A" group homes than in "B" and "C"- "D" homes.

Over nine-tenths (91.2%) of the homes in all groups have radios. By groups, we find "A" group ranks first (96.4%), "C"- "D" group second (92.3%) and "B" group last (88.5%).

More than four-fifths (82.1%) of "A" group families own automobiles. This is more than for families in "B" group where 60.6 percent have automobiles or for "C"- "D" group where 53.8 percent of the families have them.

A greater percentage of families have running water in Brigham City than in Ogden or Logan FERA groups or Plain City.

The Ogden FERA families surpass Brigham City, Logan FERA and Plain City with respect to indoor toilets.

Electric lighting is found slightly more frequently in Brigham City (98%) although Ogden FERA, Logan FERA and Plain City closely approach the same percentage.

Brigham City reported a higher percentage (93.2%) of homes owning electric washers than for the Plain City (78.5%), Ogden (63.8%) or Logan (63.2%) FERA groups.

Approximately all (97.1%) of Brigham City homes have electric irons as compared with 84.3 percent for Plain City, and 80 percent for Ogden FERA group.

Brigham City has approximately three times (38.2%) as large a proportion of telephones as Ogden FERA families and even a greater proportion than Logan FERA and Plain City groups.

The percentage (42.2%) of homes in Brigham City with pianos is almost double (21.6%) that for Ogden FERA homes and treble (14.1%) the percentage for Logan FERA families. Plain City with 31.3 percent of its dwellings with pianos comes nearest approaching that for Brigham City.

Plain City has more automobiles among its families than Brigham City which ranks second, or Ogden and Logan FERA groups.

Brigham City homes lead for electric refrigeration, and the Ogden FERA homes lead for ice. Nearly half of the homes in Brigham City have either electric or ice refrigeration as compared with approximately one-third for Ogden FERA, one-twentieth for Logan FERA and one-thirtieth for Plain City groups.

Sixteen and seven-tenths percent of Brigham City homes have electric sewing machines. This percentage is greater than for any of the other groups. Brigham City also has more electric plates than the groups in

other towns.

Ogden FERA group rates highest for proportion of families with sinks. Brigham City follows closely, Plain City next and Logan last.

Hot water connections are more numerous in Brigham City. Ogden FERA families rank second and the Logan and Plain City groups last.

For percentages of families with radios Brigham City ranks first (91.2%), Ogden FERA group second (71.2%), and Logan FERA group third (50.3%) and Plain City group last place (46.2%).

The average number of books, subscriptions to magazines and newspapers per home is greatest for "A" group, next for "B" group and last for "C"- "D" group homes in Brigham City.

The housing conditions found in "C"- "D" group homes compare closer to those found in the Ogden and Logan relief studies than do the findings in either "A" or "B" group houses. This might be expected because "C"- "D" group and the Ogden and Logan FERA groups are supposedly of lower economic status.

Educational Status and Background

A child's educational progress is generally conceded to be impeded by "poor" health. While occasionally weak minds are accompanied by strong bodies and strong minds are found in weak bodies yet by and large, strong intellects and correspondingly strong bodies are complimentary rather than inimical to each other and are ordinarily found together.

Native abilities should be given every opportunity for the fullest development. This can best be achieved by cooperate action from the home, school, community, state and auxiliary organizations. In general, the movement spells pervasive education; not only of children, but of parents and teachers as well.

Dr. Rene Sand has espoused this inclusive approach to the problem of promoting human progress by means of health. He calls it sociological medicine which he defines as "the art of prevention and cure, considered, in its scientific basis and its individual and collective applications, from the point of view of the reciprocal relations which connect the health of man with his living conditions." He insists that social, economic, educational and remedial institutions must collaborate with each other in order to purvey better health conditions for a fuller development and growth of personality.

The following data pertains to educational conditions peculiar to various groups of children who have been physically rated "A", "B", "C" or "D".

School Attendance (Table 27)

As shown by table 27 there seems to be a relationship between conditions of "health" and school attendance. By and large, boys show evidence of an average of more days absent from school than girls for all groups ("A", "B"

and "C"- "D"). However, for "C"- "D" group the average for boys (16.4 days) and girls (16 days) corresponds rather closely. It may further be observed that "A" group (both sexes) has a lower average of inattendance at school (8.9 days) than "B" which ranks next with 10.1 days or the "C"- "D" group which averages 16.2 days, almost twice as many absences per child as is found among "A" children.

The girls show a slightly better attendance record than boys, although all percentages are 90 or above. "A" group children attended school on an average of 95.4% of the time. This exceeds the record of 93.9 percent for "B" children and 90.5 percent for "C"- "D" pupils. The disparity between the groups with respect to percentage of school attendance, indicates that positive relationship exists between school attendance and condition of health. (Figure 18)

Table 27

Average number of days absent and percentage of school attendance for seventh and eighth grade boys and girls, grouped according to physical rating, Brigham City, Utah, 1935-36

Groups	Average Number : of Days Absent			Average Percent- : age of : Attendance		
	: Boys	: Girls	: Total	: Boys	: Girls	: Total
	:	:	:	:	:	:
"A"	: 10.	: 7.0:	8.9:	95.2:	95.8:	95.4
"B"	: 11.4:	8.3:	10.1:	93.1:	94.9:	93.9
"C"- "D"	: 16.4:	16.0:	16.2:	90.3:	90.6:	90.5
Total	: 11.6:	9.3:	10.5:	93.5:	94.4:	93.9

An interesting side-light that seems appropriate at this point is the fact that of the six children considered as delinquents in this study, truancy being the prime offense, five are boys. Furthermore, inasmuch as "B" and "C"- "D" children (in this study) generally come from families with lower incomes than "A" children, it would be interesting to know if a great-

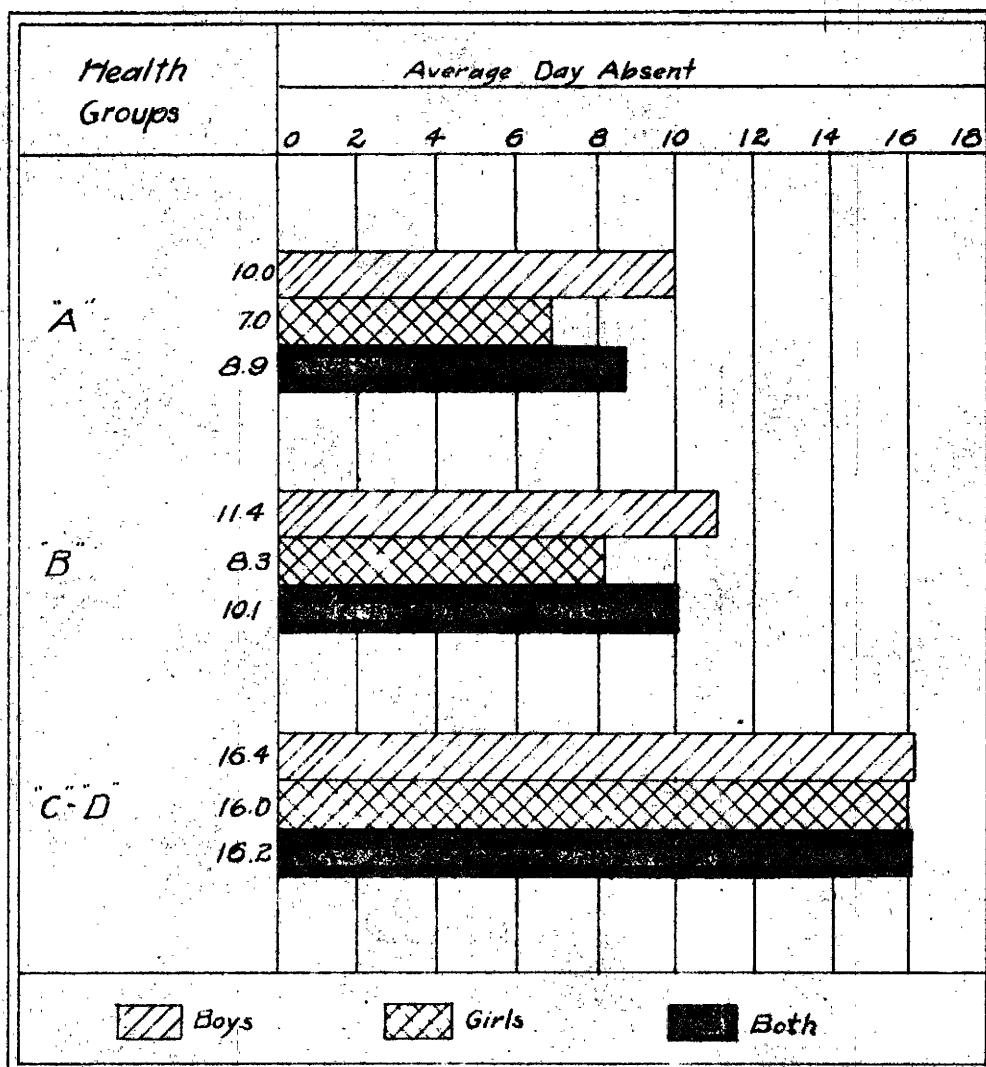


Figure 18. Average number of days Brigham City children were absent from school (1935-36) by groups of seventh and eighth grade pupils classified according to physical rating.

er percentage of "B" and "C"- "D" children are retained at home for the express purpose of assisting the family to eke out a livelihood or whether absence was a direct result of poor health, dislike for school or supine attitude of parents or guardians.

Scholarship (Table 28)

For lack of a better index with respect to scholarship, the average scholastic grade of each child as calculated by his advisory teacher is used. It should be borne in mind that this system of rating children is often inadequate.

With scholarship as with attendance, girls rate higher than boys in each of the groups. Analyzing further it is evident that "A" group (sexes combined) has a slightly higher average scholastic standing (79.5%) than "B" (78.8%) or "C"- "D" (72.6%) groups. Figure 19 shows these relationships in graphic form.

To sum up the differences among the three groups in more common symbols, we might say that "A" children's average grade is "C plus" or a low "B minus" as compared with a "C plus" for "B" children and "C minus" for "C"- "D" pupils. Although these differences are small they are nevertheless significant.

Table 28

Average scholastic grade (all subjects) by sex, of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935-

36 *

Group	Average Grade (all subjects)		
	Boys	Girls	Total
"A"	77.7	82.7	79.5
"B"	78.8	79.8	78.8
"C"- "D"	74.4	71.5	72.6
Total	77.5	79.0	78.2

* Data obtained from school records

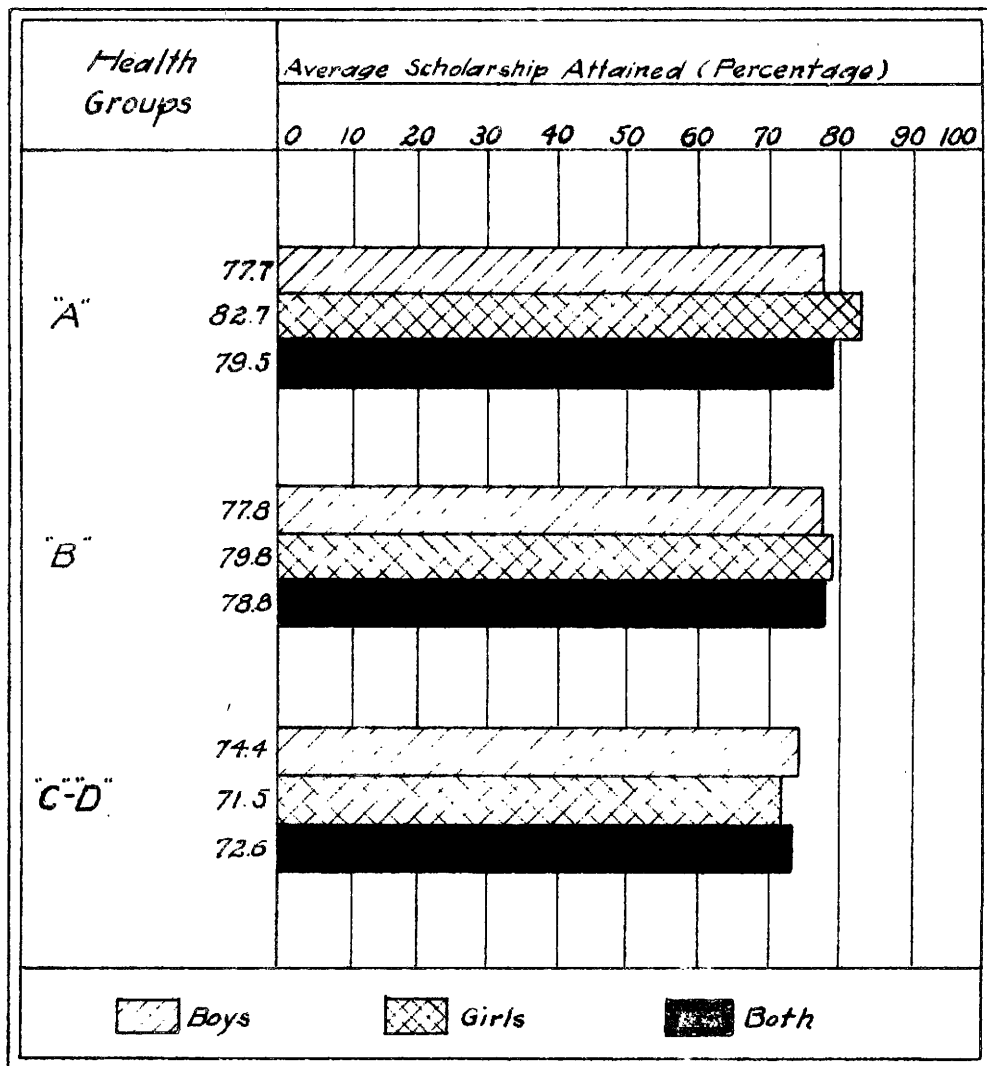


Figure 19. Average scholastic grade achieved by groups of seventh and eighth grade Brigham City children classified according to physical rating during the year 1935-36

Grades Repeated (Table 29)

The contents of tables 27 and 28 tend to substantiate each other as regards the sexes. That is, inasmuch as we find the boys with lower scholarship records than the girls it is not alarming to also find that a greater percentage of boys have repeated school grades. A lower scholarship would naturally increase the chances of retention.

Of "A" boys and girls 25 percent have repeated school grades. Seven and seven-tenths percent more of "A" boys than girls have been retained once or more.

In "B" group as indicated in figure 20 a larger proportion of boys (35.5%) have repeated grades than in "A" group (27.7%), but "B" girls with 13.3 percent show a decrease of 6.7 percent when compared with "A" girls with 20 percent. The average for both sexes is practically the same, 25 percent for "A" children and 24.6 percent for "B" children. Four-fifths of "C"- "D" boys and one-half of the girls have repeated school grades. Thus the figures for "C"- "D" children represent substantial increases over children from "A" or "B" groups. If the percentage of both sexes in "C"- "D" group is considered, more than three-fifths have been retained in school. This is more than double the percentage of either "A" or "B" groups.

Totaling all groups 37 percent of the boys have been retained and 20.8 percent of the girls. The average grade repetitions for both boys and girls is 29.4 percent.

In an Ogden FERA study a higher percentage of girls (5%) than boys (3.2%) were reported as having been retained. (34) Besides these percentages being small when compared with those in Brigham City, the girls exceed the boys, a condition which is reversed in the Brigham City study. There is very

(34) Lillywhite, Leah P. "A Study of Children in 169 FERA Families in Ogden, Utah, 1935". M. S. Thesis p. 80

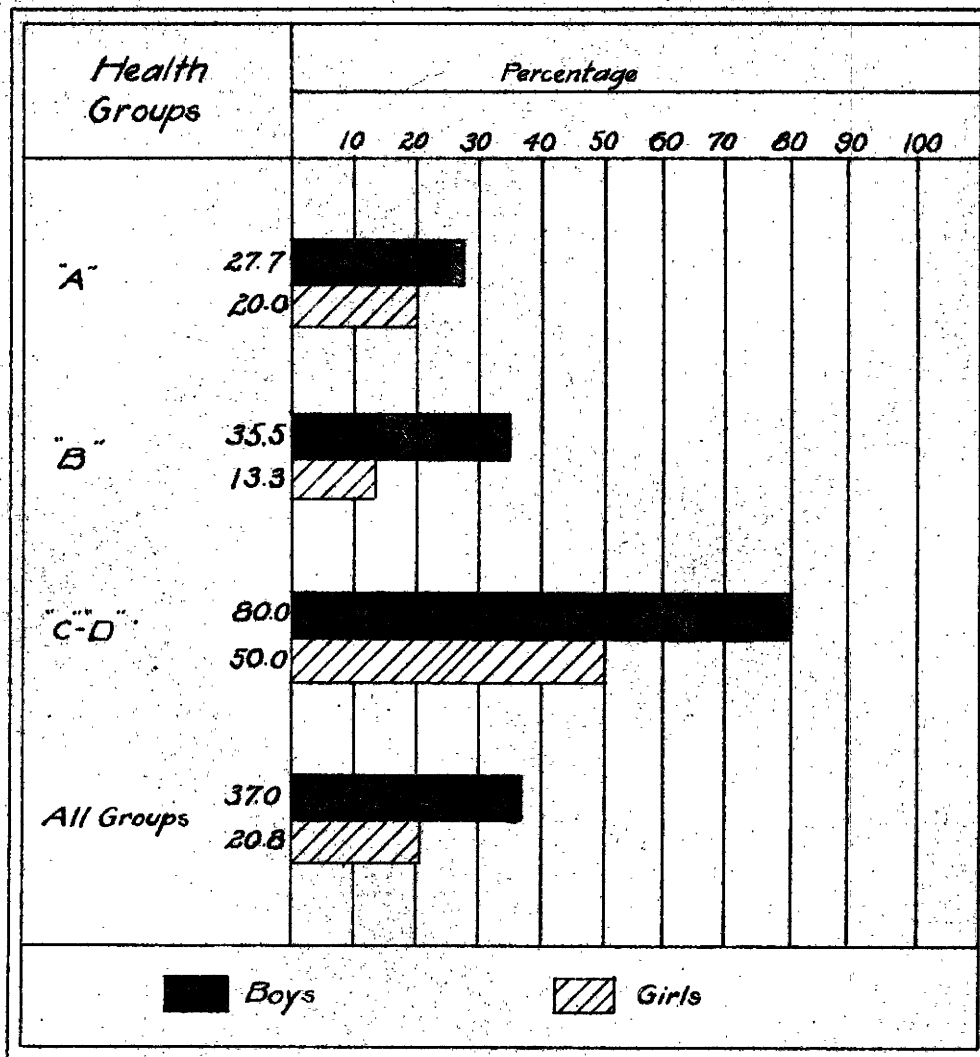


Figure 20. Percentage of boys and girls who have repeated school grades, by groups and for all groups of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935-36

little if any difference in school repeats among "A" and "B" children, but there is a considerable increase among "C"- "D" children.

Table 29

Number and percentage of boys and girls who have repeated or not repeated school grades, by groups of seventh and eighth grade children classified according to physical rating, Brigham City, Utah, 1935

Groups	Children Who Have																
	Not Repeated Grades						Repeated Grades										
	Boys			Girls			Boys			Girls							
	No.:	%		No.:	%		No.:	%		No.:	%						
"A"	13	72.3	:	8	80.0	:	21	75.0	:	5	27.7	:	2	20.0	:	7	25.0
"B"	20	64.5	:	26	86.7	:	46	75.4	:	11	35.5	:	4	13.3	:	15	24.6
"C"- "D"	1	20.0	:	4	50.0	:	5	38.5	:	4	80.0	:	4	50.0	:	8	61.5
Total	34	63.0	:	38	79.2	:	72	70.6	:	20	37.0	:	10	20.8	:	30	29.4

Extra-Curricular Activities (Table 30)

It is generally recognized by educators that extra-curricular activities have a beneficial effect on the health and morals of children when carried on within reasonable limits. Prodigious numbers of extra-curricular activities on the one hand or a deficiency on the other hand are injurious. An optimum number should be the objective.

Evidently extra-curricular activities are not excessive in the Brigham City Junior High School. The facts that "A" group children who participate in more extra-curricular activities than "B" or "C"- "D" groups and who also have the best attendance and scholarship records seems to confirm this statement. If extra-curricular activities were overdone it is probable that the school records of the children would reflect the effects.

More "A" group children participated in student executive offices, physical activities, and special interest activities (music, drama, band,

etc.) than either of the other two groups. Comparing "B" and "C"- "D" children slightly more "C"- "D" children are student executives (.4 executive office per child) than "B" children (.3 per child). The average number of physical activities per child is equal (1.12), but "B" children (2.6) exceed "C"- "D" (1.6) with respect to average number of special interest activities by one activity per child. From this it is seen that "B" children excel "C"- "D" children in special interest activities, equal them in physical activities, but are slightly inferior to "C"- "D" children with respect to student executive offices.

Considering all extra-curricular activities "A" children average 4.9 per child as compared with 4.2 for "B" group and 3.2 for "C"- "D". Thus, healthy children on the whole tend to participate in more activities than those not so healthy.

Table 30

Participation in extra-curricular activities by children grouped according to physical rating, Brigham City, Utah, 1935-36

Groups	Total Number Reporting	Average Number per Child			Total Number of Extra- Curricular Activities	Average Number Participated in per Child
		Executive Offices Held	Physical Activities Participated in	Special Interest Activities Participated in		
"A"	28	.7	1.5	2.8	138	4.9
"B"	61	.3	1.2	2.6	254	4.2
"C"- "D"	13	.4	1.2	1.6	42	3.2
Average	102	.4	1.3	2.5	434	4.3

Education of Parents

Fathers (Table 31)

On the whole the data shows that fathers of "A" group children have

gone farther in school than the fathers of "B" or "C"- "D" children. The average for "A" fathers is about a half grade more completed than "B" and approximately two and one-third grades more than for "C"- "D" fathers.

It is interesting to note that over nine-tenths (92.4%) of "A" group fathers have completed eight or more grades as compared with more than three-fourths (79.6%) for "B" group and less than three-fifths (58.3%) for "C"- "D" group fathers. Four out of 26 (15.4%) of "A" fathers have completed four or more years of college. "B" fathers come next with 2 out of 54 (3.7%). None of the "C"- "D" fathers completed grades beyond the tenth.

Brigham City fathers included in this study with the most formal education have the healthiest children.

The average number of school grades completed by Brigham City fathers is 1.1 more than the number completed by the Ogden FERA fathers and 1.6 more than the average number finished by the Logan FERA fathers. Thus, these data tend to show that the average number of school grades completed by fathers in the Brigham City area (assuming the sample to be representative of the general population) is somewhat higher than the averages for the Ogden and Logan relief fathers. Educational training is approximately the same among Brigham City "C"- "D" sires who have the lowest economic status, and the Ogden and Logan FERA fathers. Probably more significant than the average school grades completed by the fathers of these various groups is the fact that the Ogden and Logan FERA percentages for fathers having completed less than seven grades is more than double that for Brigham City. But on the other hand, we find on the upper end of the scale four Brigham City fathers continuing in school beyond four years of college as against none for the FERA fathers from Ogden and Logan.

Table 31

Number of school years (grades) completed by: (1) fathers of seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935-36; (2) Fathers of Ogden FERA families, 1935; and (3) Fathers of Logan FERA families, 1934

Group	Number and Percent of Fathers Completing													:Total :No. :Report- :ing	:Average:	
	6th	: 7th	: 8th	: 9th	: 10th	: 11th	: 12th	: 1 yr.	: 2 yrs.	: 3 yrs.	: 4 yrs.	: More	: than 4 : years : College		: School : Grade : Com- : pleted	: Un- : known
	: Grade	: Grade	: Grade	: Grade	: Grade	: Grade	: Grade	: College	: College	: College	: College	: College				
	: or	: Grade	: Grade	: Grade	: Grade	: Grade	: Grade	: College	: College	: College	: College	: College				
	: Below	:	:	:	:	:	:	:	:	:	:	:				
	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:No.: %	:	:	:	
"A"	: 1 : 3.8	: 1 : 3.8	: 7 : 26.9	: 2 : 7.7	: 3 : 11.5	: 3 : 11.5	: 4 : 15.4	: 1 : 3.8	: 0 : 0.0	: 0 : 0.0	: 0 : 0.0	: 2 : 7.7	: 2 : 7.7	: 26	: 9.9	: 2
"B"	: 8 : 14.8	: 3 : 5.6	: 19 : 35.1	: 3 : 5.6	: 4 : 7.4	: 2 : 3.7	: 4 : 7.4	: 2 : 3.7	: 5 : 9.3	: 2 : 3.7	: 0 : 0.0	: 2 : 3.7	: 54	: 9.4	: 7	
"C"- "D"	: 2 : 16.7	: 3 : 25.0	: 5 : 41.7	: 1 : 8.3	: 1 : 8.3	: 0 : 0.0	: 0 : 0.0	: 0 : 0.0	: 0 : 0.0	: 0 : 0.0	: 0 : 0.0	: 0 : 0.0	: 0 : 0.0	: 12	: 7.6	: 1
Total	: 11 : 12.1	: 7 : 7.6	: 31 : 33.8	: 6 : 7.1	: 7 : 7.6	: 5 : 5.4	: 8 : 8.8	: 3 : 3.3	: 5 : 5.5	: 2 : 2.2	: 2 : 2.2	: 4 : 4.4	: 92	: 9.3	: 10	
Ogden(35)																
FERA	: 27 : 26.3	: 8 : 7.7	: 35 : 34.0	: 5 : 4.8	: 9 : 8.6	: 1 : 1.0	: 11 : 10.7	: 4 : 3.9	: 1 : 1.0	: 0 : 0.0	: 2 : 2.0	: 0 : 0.0	: 103	: 8.2	:	
Logan(36)																
FERA	: 21 : 26.5	: 8 : 10.0	: 22 : 27.0	: 6 : 7.5	: 11 : 13.8	: 4 : 5.0	: 5 : 6.3	: 0 : 0.0	: 1 : 1.3	: 1 : 1.3	: 1 : 1.3	: 0 : 0.0	: 80	: 7.7	:	

(35) Lillywhite, Leah P. "A Study of Children in 169 Families in Ogden, Utah, 1935". M. S. Thesis, p. 81

(36) Fredrickson, Carmen D. "A Study of Family Conditions Among FERA People in Logan, Utah, 1934". M. S. Thesis p. 12

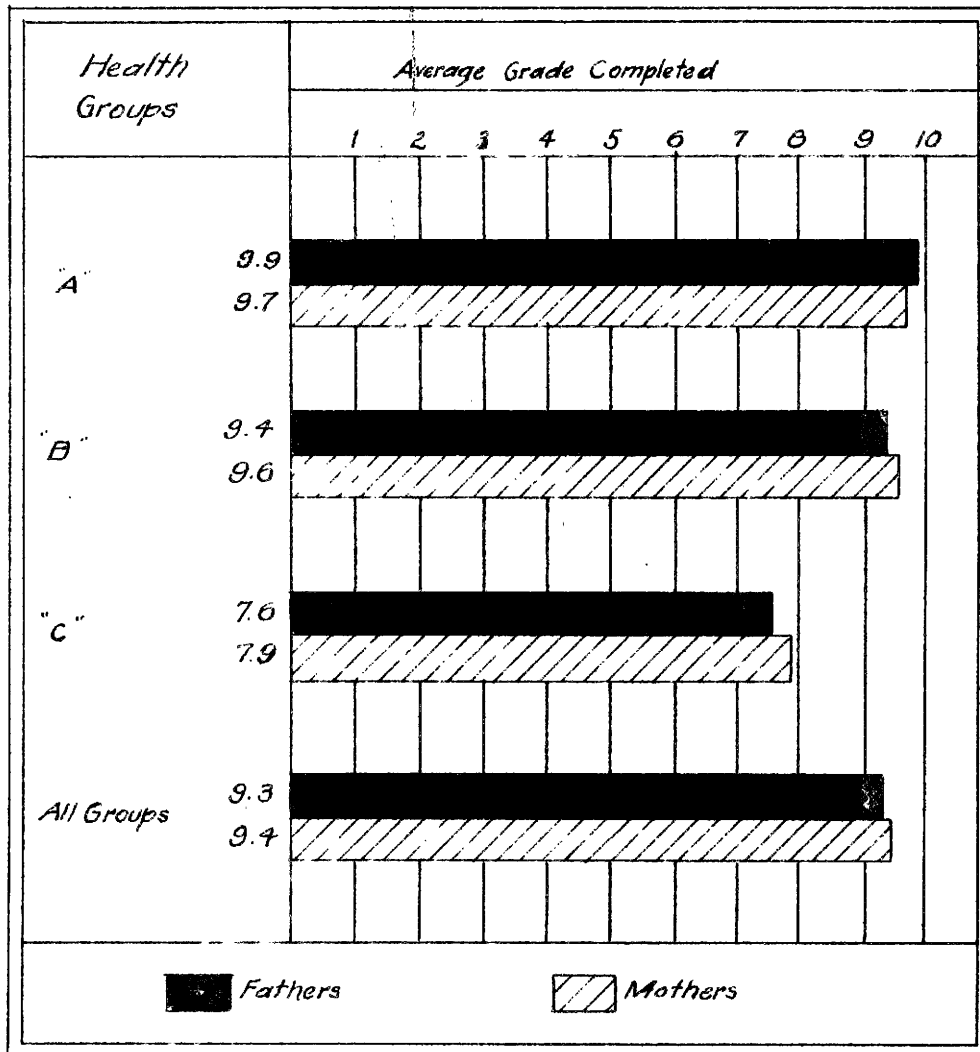


Figure 21. Average number of school grades completed by fathers and mothers of seventh and eighth grade children classified according to physical rating, and for all groups, Brigham City, Utah, 1935-36

Mothers (Table 32)

Formal education for mothers and fathers (all groups) is very nearly the same for the parents of Brigham City study-children. Ninety-six and three-tenths percent of "A" group mothers have completed eight or more school grades as compared with 13.2 percent for "B" group and 69.2 percent for "C"- "D". These percentages are somewhat higher than those for the fathers. This however does not tell the whole story, for on the upper end of the scale we find no mothers with more than three years of college whereas six fathers have received an education past this level .

The average education of "A" group mothers is 9.7 grades. This is slightly higher than that for "B" group which is 9.6 grades. "C"- "D" group mothers have an average education of 7.9 school grades. This is nearly two grades behind "A" and "B" mothers. Thus, the educational achievement for mothers as well as fathers of "C" or "D" physically rated children is considerably lower than that for the parents of either "A" or "B" rated children.

Figure 21 brings out the relationships between fathers and mothers with respect to educational status.

On an average mothers from the Brigham City section have completed more grades of formal schooling than either the Ogden or Logan FERA mothers. The average number of grades completed by Brigham City mothers was 9.4, that for Ogden FERA mothers 8.3, and for Logan FERA mothers 8.4 grades. This higher average for Brigham City is to be expected, since the data represents a cross-section of the economic classes while relief classes only are represented in the FERA studies. The "C"- "D" group mothers in Brigham City, which represents the lowest economic class, may with propriety be compared

Table 32

Number of school grades completed by: (1) mothers of seventh and eighth grade children grouped according to physical rating, Brigham City, Utah, 1935; and (2) mothers of Ogden FERA families, 1935, and (3) mothers of Logan FERA families, 1934

Group	Number and Percent of Mothers Completing														Total No. Report- ing	Average:											
	6th	7th	8th	9th	10th	11th	12th	1 yr.	2 yrs.	3 yrs.	4 yrs.	More	No.	School													
	Grade	Grade	Grade	Grade	Grade	Grade	Grade	College	College	College	College	Years	Grade	Un-													
	or	Grade	Grade	Grade	Grade	Grade	Grade	College	College	College	College	College	Com-	known													
	Below												pleted														
	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%													
"A"	0	0.0	1	3.7	11	40.7	3	11.1	6	22.3	1	3.7	0	0.0	2	7.4	2	7.4	1	3.7	0	0.0	0	0.0	27	9.7	1
"B"	2	3.4	2	3.4	25	43.2	6	10.3	7	12.1	3	5.2	3	5.2	5	8.6	4	6.9	1	1.7	0	0.0	0	0.0	58	9.6	3
"C"- "D"	2	15.4	2	15.4	6	46.1	2	15.4	0	0.0	0	0.0	1	7.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	13	7.9	0
Total																											
Brigham	4	4.1	5	5.1	42	42.9	11	11.2	13	13.3	4	4.1	4	4.1	7	7.1	6	6.1	2	2.0	0	0.0	0	0.0	98	9.4	4
Ogden*																											
FERA	32	24.5	6	5.0	42	35.6	11	9.3	7	5.9	3	2.5	9	7.5	6	5.2	4	3.5	0	0.0	1	0.9	0	0.0	118	8.3	
Logan*																											
FERA	13	14.0	11	11.7	31	32.9	10	10.6	13	13.8	6	6.4	5	5.3	2	2.1	3	3.2	0	0.0	0	0.0	0	0.0	94	8.4	

* See footnotes for Table 3 1

with the relief mothers in Ogden and Logan. Here the averages are very nearly equal: 7.9 grades for "C"- "D" mothers; 8.3 grades for Ogden FERA mothers; and 8.4 grades for Logan FERA mothers. However, a much greater percentage of Ogden and Logan relief mothers have completed less than the seventh grade when compared with the percentage for Brigham City. We also find more Brigham City mothers completing higher grades. The educational status of "C"- "D" group mothers approaches closer than any other Brigham City group to that of the relief mothers of Ogden or Logan.

Ogden and Logan FERA data indicate that mothers and fathers of FERA families have achieved a lower educational level than a cross-section of Brigham City parents.

Delinquency

Of the 102 children studied only six are considered by the coordinator and juvenile officer as being delinquent. This number represents approximately one-twentieth (5.9%) exhibiting traits of maladjustment. None of these children are in or have been in reformatory institutions. Among the six thus designated as delinquent we find one girl and five boys. None of the maladjusted children had physical ratings of "C" or "D", one had a rating of "A" (a boy) and the remaining five (4 boys and one girl) had "B" ratings. These delinquents are not of the poorest health. Evidently delinquency and poor health are not correlated.

The following offenses for which specific numbers of children were apprehended will signify the nature of delinquencies peculiar to this small group:

<u>Offense</u>	<u>No.</u>	<u>%</u>
Truancy	6	100%
Stealing, or attempt at	4	66 2/3%

Four of the six used tea, coffee or tobacco.

Summary

Children with a physical rating of "A" have better records for scholarship and school attendance when compared with those rated "B", which rank next, or those rated "C"- "D" which rank lowest.

For percentage of children retained in school "A" and "B" physically rated children range rather closely, but each has less than half as many as "C"- "D" rated pupils.

More extra-curricular activities are participated in per child by "A" rated children (4.9) than for "B" (4.2) or "C"- "D" (3.2). These extra-curricular activities include student executive offices, physical activities, and special-interest activities. It is expected that the physical condition of "B" and "C"- "D" children would prevent them from indulging in some physical activities, and this may account for some of the disparity between the groups, but this does not necessarily prohibit them, voluntarily, from engaging in the other two types.

The educational status of mothers and fathers (all groups totaled) of all study-children is relatively equal. The slight difference is in favor of the mothers who have an average of one-tenth of a year more schooling than the fathers. As between the groups the parents of "A" group children reached a higher educational apex than did those of "B" children, which is nearly as high, or than those of "C"- "D" children. The disparity between either "A" or "B" group is approximately two school grades when compared with the educational status of "C"- "D" parents.

Five-sixths (83 1/3%) of the delinquents have "B" physical ratings. This study indicates that the health of delinquents is fairly good.

Family Relations

The essentials of this section will emphasize facts concerning the family as they are related to seventh and eighth grade children classified according to physical rating.

Family Parental Representation (Table 33)

More (96.4%) of "A" group children are living with both parents than "B" (85.2%) or "C"- "D" (84.6%) children. (Figure 22) There is but one study-child in all the groups living in a family represented by a father only. This child has a physical rating of "B".

Families represented by a mother but without a father representation occur most frequently among "B" rated children. Six out of 61 (9.9%) "B" group children are living in families represented by a mother but not a father as compared with one out of thirteen (7.7%) for "C"- "D" children and one out of 27 (3.6%) for "A" children.

Table 33

Seventh and eighth grade children grouped according to physical rating, living with two, one, or neither parent, Brigham City, Utah, 1935-36

Groups	: Number and Percent of Children Belonging to							
	: Two-Parent		: One-Parent Families				: No-Parent	
	: Families		: Father Rep-		: Mother Rep-		: Families	
	:		: representation		: representation		:	
	: No.	: %	: No.	: %	: No.	: %	: No.	: %
"A"	: 27	: 96.4	: 0	: 0.0	: 1	: 3.6	: 0	: 0.0
"B"	: 52	: 85.2	: 1	: 1.6	: 6	: 9.9	: 2	: 3.3
"C"- "D"	: 11	: 84.6	: 0	: 0.0	: 1	: 7.7	: 1	: 7.7
Total	: 90	: 88.2	: 1	: 1.0	: 8	: 7.9	: 3	: 2.9

None of the "A" children are living in families represented by neither parent whereas one (7.7%) "C"- "D" child is living under this handicap and two (3.3%) "B" children.

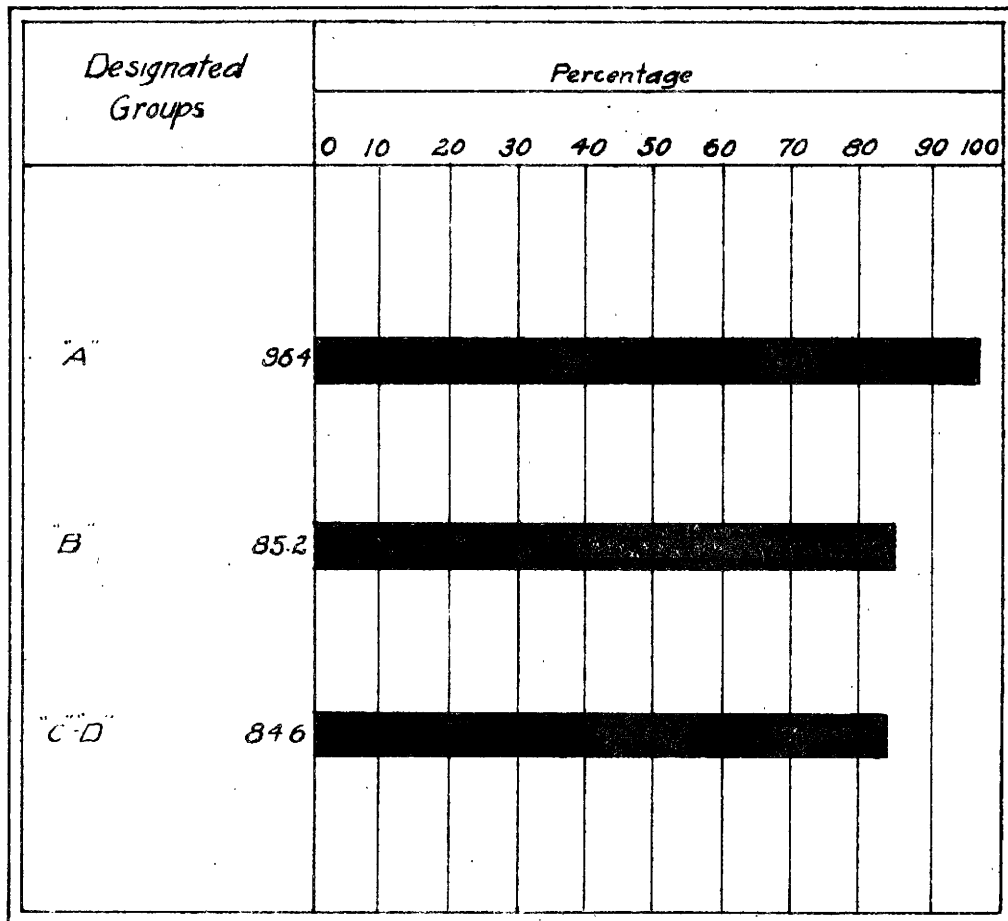


Figure 22. Percentage of seventh and eighth grade children classified according to physical rating who are living with both parents, Brigham City, Utah, 1936

Briefly, children with a physical rating of "A" are enjoying the much needed direction of both parents more than are children with a physical rating of "B", "C" or "D".

Marital Status (Table 34)

The percentage (96.4%) of parents married and living together is greatest for "A" group children, next greatest (91.7%) for "B" children and smallest (86.4%) for "C"- "D" children.

For parents married but not living together (not divorced) three (5.1%) "B" group children are the only unfortunates subjected to such connubial circumstances.

Divorces among the families are rare. "A" and "C"- "D" group families report no divorces. The only divorce found was one which occurred in a "B" group family.

Widows are found in the "C"- "D" group in one out of each thirteen families (8.5%) as compared with one in twenty (5.1%) in the "B" group and one in twenty-eight (3.6%) in the "A" group.

The only widower is found in the "B" group.

Considering all groups, approximately nine-tenths (89.9%) of the families are represented by the two parents, living together.

Table 34

Marital status of parents of seventh and eighth grade children, grouped according to physical rating, Brigham City, Utah, 1935-36

Groups	Marital Status of Parents									
	Married				Divorced		Widowed		Widower	
	L. Together		Separated							
	No.	%	No.	%	No.	%	No.	%	No.	%
"A"	27	96.4	0	0.0	0	0.0	1	3.6	0	0.0
"B"	51	86.4	3	5.1	1	1.7	3	5.1	1	1.7
"C"- "D"	11	91.7	0	0.0	0	0.0	1	8.3	0	0.0
Total	89	89.9	3	3.0	1	1.0	5	5.1	1	1.0

Marriage Age of Parents (Table 35)

Fathers

Although a small percentage of fathers in each group married younger than twenty, "C"- "D" group has the highest percentage of fathers who married young (7.7%). "B" has the next highest (5.2%) and "A" the lowest (3.6%).

Fathers who married between the ages of 20 to 25 years are more prevalent in "A" group (64.3%) than in either "B" group (46.5%) or "C"- "D" group (46.2%).

In the age interval 25 to 30 years "A" group fathers have a smaller percentage (25%) than "B" (29.3%) or "C"- "D" (38.4%) group fathers.

Slightly less than one-fifth (19%) of "B" fathers married at 30 years or over. This is more than twice as high a percentage than is found in "A" (7.1%) or "C"- "D" (7.7%) group fathers.

The average age at which fathers married was 24.5 years for "C"- "D" fathers, 27.2 for "B" fathers and 26.3 for "A" fathers. "C"- "D" fathers thus married 1.8 years younger than ^{"A"} fathers who ranked next and 2.7 years younger than "B" fathers.

Mothers

As might be expected the marriage age of mothers is correspondingly lower than that of fathers for each group. The difference in age when married is approximately six years in each group.

Again for parents married when less than 20 years old "C"- "D" mothers as with fathers have the highest percentage (38.4%) with "B" mothers ranking next (36.2%) and "A" mothers the smallest (28.6). Early marriage and poor health rating for children seem to be related to some extent.

More than two-thirds (67.8%) of "A" mothers married between the ages

Table 35

Age at which parents of seventh and eighth grade children classified according to physical rating, were married, Brigham City, Utah, 1935-36

Physical Ratings	Age of Father								Age of Mother								Average Age when Married		
	Under 20	20-24.9	25-29.9	30 and Over	Under 20	20-24.9	25-29.9	30 and Over	Under 20	20-24.9	25-29.9	30 and Over	Under 20	20-24.9	25-29.9	30 and Over	Father	Mother	Together
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %			
"A"	1 : 3.6	18:64.3	7 : 25.0	2 : 7.1	8 : 28.6	19:67.8	1 : 3.6	0 : 0.0	26.3	20.1	23.2								
"B"	3 : 5.2	27:46.5	17 : 29.3	11 : 19.0	21 : 36.2	28:48.3	4 : 6.9	5 : 8.6	27.2	21.6	24.4								
"C"- "D"	1 : 7.7	6:46.2	5 : 38.4	1 : 7.7	5 : 38.4	6:46.2	1 : 7.7	1 : 7.7	24.5	19.4	22.0								
Total	5 : 5.1	51:51.5	29 : 29.3	14 : 14.1	34 : 34.3	53:53.5	6 : 6.1	6 : 6.1	26.7	20.9	23.7								

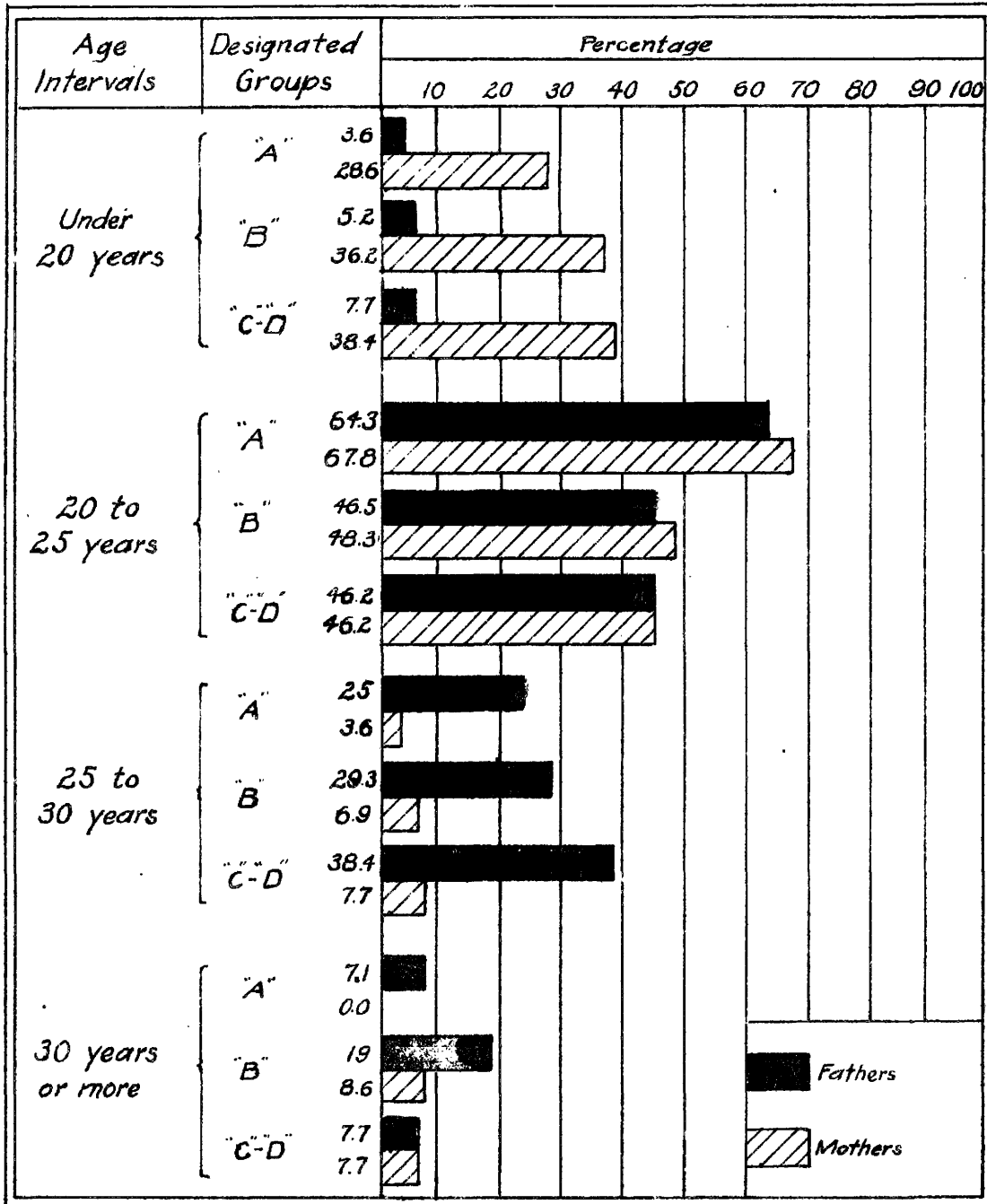


Figure 23. Percentage of fathers and mothers who married at specified age intervals by groups of seventh and eighth grade classified according to physical rating, Brigham City, Utah

of 20 to 25. This proportion is higher than for "A" fathers. Less than half of "B" (48.3%) and "C"- "D" (46.2%) mothers married between these ages.

Only one (3.6%) "A" group mother waited until she was 25 or over before she married. Comparing "B" and "C"- "D" mothers on this same basis we find nine (15.5%) of "B" mothers and two (15.4%) of "C"- "D" mothers who delayed marriage until at this age or later.

There seems to be little difference between the average marriage ages for "A" (20.1 years) "B" (21.6 years) and "C"- "D" (19.4 years) group mothers, but in ranking them from youngest to oldest the groups rank the same as they do for the fathers ("C"- "D", "A" and "B").

As brought out in figure 23 the marriage age range for both fathers and mothers of children with a physical rating of "A" is shorter and with a high concentration of cases in the 20 to 25 age interval. The ranges for fathers and mothers of children having a rating of "B" or "C"- "D" have greater spreads. The age interval 20 to 25 is also the greatest point of concentration for these latter groups but not to such a great extent as the former.

It appears that children whose health rating is best come from parents who avoid early marriages and late marriages. More largely they wait until early adulthood, but after going on the marriage market do not remain on it long.

Number of Brothers and Sisters of Children Grouped According to Physical Ratings (Table 36)

Not only are "B" and "C"- "D" groups from the lower income groups, but they also have an average of more children per family than do "A" group families.

Families with but one living child are of very nearly the same proportion for "A" (7.1%) "B" (6.6%) and "C"- "D" (7.7%) groups. Again for

families with 2 children, even tho "A" group has a lower percentage, the three groups compare favorably.

Approximately two-thirds (64.3%) of children with a physical rating of "A" come from families with five or less living children as compared with a little more than half for children rated "B" (51.0%) and "C"- "D" (53.8%).

Figure 24 shows the average number of living children for each group. "A" children have the fewest living brothers and sisters, "B" children rank next and "C"- "D" children last.

Thirty and eight-tenths percent, or about one child in three of those rated "C" or "D" come from families with nine or more living children. This percentage is about double that of "A" (14.2%) and "B" (17.9%) rated pupils.

Table 37 compares the number of children per family in this study with the number found in other areas. Brigham City families are larger than relief families in New York, Ogden or Logan. When compared with New York's normal group the difference in size is even greater. Thirty-eight and two-tenths percent of families in Brigham City have seven or more children per family as compared with 7.3 percent for New York Relief families, 4.1% for Ogden FERA families, and 4.3 percent for the Logan FERA group.

Whereas all Brigham City groups averaged more than five children per family the Ogden FERA families average but three.

Table 36

Physically rated groups of seventh and eighth grade pupils, Brigham City, Utah, 1935 in
relation to number of living children in the family

Number and Percent of study-children belonging to families with												Total	Average									
	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Ten	No.	No.										
Groups	living	living	living	living	living	living	living	living	living	living	Report	Living										
	child	child.	child.	child.	child.	child.	child.	child	child.	child.	ing	Chil-										
	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	No.:	%	dren									
"A"	2	7.1	1	3.6	7	25.0	4	14.3	4	14.3	1	3.6	3	10.8	2	7.1	2	7.1	2	7.1	28	5.1
"B"	4	6.6	4	6.6	9	14.8	7	11.5	7	11.5	5	8.2	10	16.3	4	6.6	5	8.2	6	9.7	61	5.6
"C"- "D"	1	7.7	1	7.7	4	30.7	0	0.0	1	7.7	1	7.7	1	7.7	0	0.0	2	15.4	2	15.4	13	5.8
Total	7	6.9	6	5.9	20	19.6	11	10.8	12	11.7	7	6.9	14	13.7	6	5.9	9	8.8	10	9.8	102	5.5

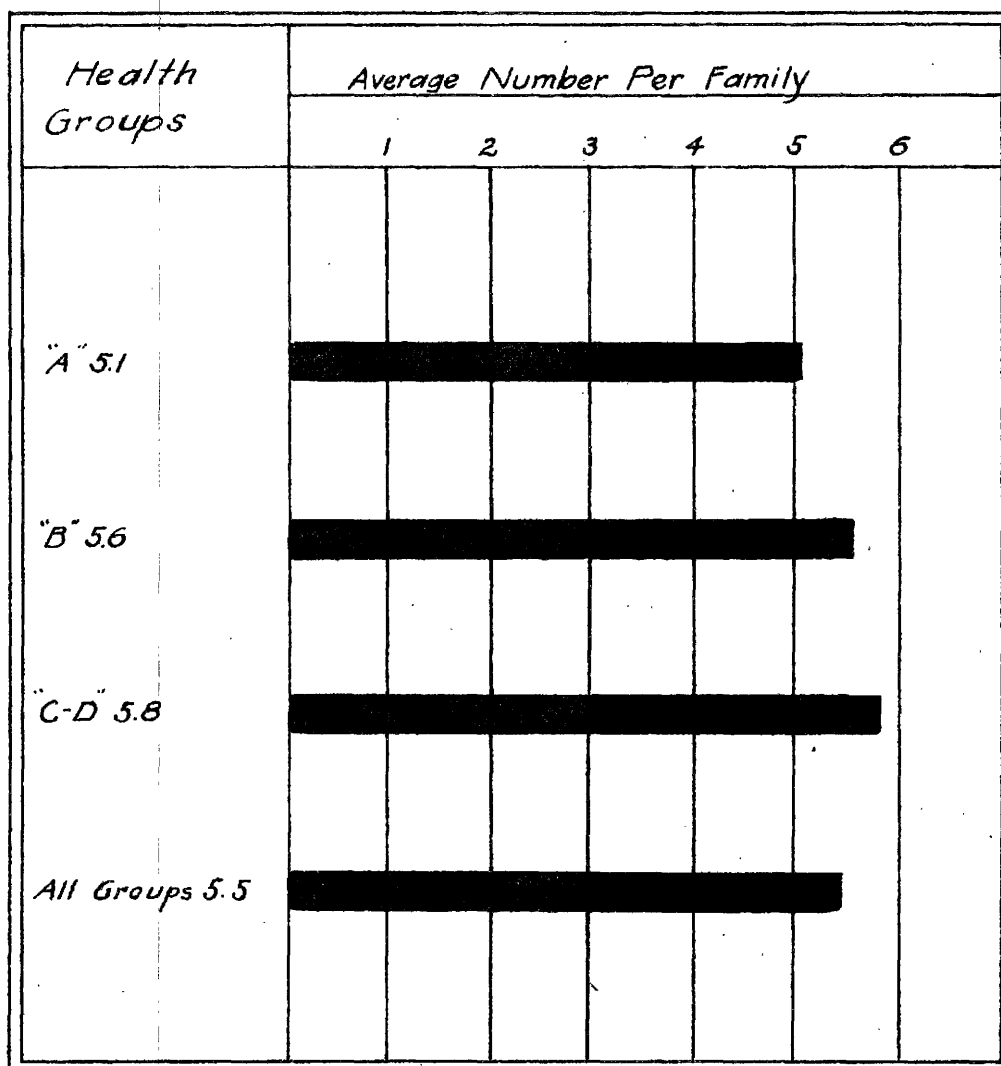


Figure 24. Average number of living children per family by groups of seventh and eighth grade children classified according to physical rating, and for all groups, Brigham City, Utah, 1936

Table 37

Number of children per family compared: (1) Brigham City, Utah, 1936; (2) Ogden FERA, 1935; (3) Logan FERA, 1934; and (4) New York normal, marginal and relief groups

Group	Percent Having Designated Number of Children Per Family										
	1	2	3	4	5	6	7	Total			
	Child							or more			
<u>New York (37)</u>											
Normal	40.5	28.7	17.0	6.8	3.9	2.5	0.8	100.0			
Marginal	30.9	30.5	17.5	10.1	5.4	2.5	3.1	100.0			
Relief	21.1	23.1	20.5	11.8	9.5	6.7	7.3	100.0			
Brigham City	6.9	5.9	19.6	10.8	11.7	6.9	38.2	100.0			
Ogden FERA	24.0	19.9	25.3	13.0	10.3	3.4	4.1	100.0			
Logan FERA	21.4	14.2	22.8	18.6	8.6	10.0	4.3	100.0			

Race

All fathers, mothers and children belong to the "white" race.

Nationality

All parents are descendants of northern European countries.

Inasmuch as "pure" nationalities are rare, the dominant nationality of each parent was obtained.

Forty-six and six-tenths percent of the fathers and mothers of "A" group children are dominantly English as compared with 40.2 percent for "B" children and 30.8 percent for "C"- "D" children.

The nationality ranking next is the Danish. Forty-six and two-tenths percent of "C"- "D" children have fathers and mothers of this nationality as against 33.6 percent of "B" children and 28.6 percent of "A" children. The children of English nationality thus have better health ratings than do those of Danish extraction.

The Swedish nationality ranks next. In the "A" group ten and seven-tenths percent of the children are of Swedish descent, 9 percent in the

(37) Ref. Lundberg, Emma A., "Who are New York's Emergency Relief Families?" p. 620

"B" group are of this nationality as are 3.8 percent in the "C"- "D" group. Swedish children thus make a better health showing than do the Danish.

Children predominantly German predominate in the "A" rating with 8.9 percent as against 2.5 percent in the "B" rating and 3.8 percent in the "C"- "D" rating.

All other nationalities are lumped together. These include Irish, Scotch, Welsh, French and Norwegians. Seven and two-tenths percent of "A" group fathers and mothers were of one or another of these nationalities as compared with 14.7 percent of "B" group parents and 15.4 percent of "C"- "D" group fathers and mothers. This 14.7 percent of "B" group parents coming within this broad classification is divided among the above mentioned nationalities in the following proportions: Scotch 4.9 percent; Irish 4.9 percent; Welsh 2.5 percent; French 1.6 percent; and Norwegian .8 percent. The 15.4 percent of "C"- "D" group parents falling in this same classification is divided equally between two nationalities: Scotch 7.7 percent and Irish 7.7 percent. Thus, from the foregoing data it seems that a greater percentage of "B" and "C"- "D" groups' fathers and mothers are of either Scotch or Irish descent than of German heritage. This same tendency, however, does not hold true for "A" group's parentage.

Birth Place of Parents

All parents of children with a physical rating of "A" are American born. This is somewhat higher than the percentages of parents American born for "B" or "C"- "D" children which are 94.3 percent and 84.6 percent respectively. On the whole American^{born} parents are doing a little better with the health of their children.

Summary

A greater percentage of children with "A" health ratings come from families in which both parents are represented than that for children with "B" ratings, who rank next highest, or for those with "C"- "D" ratings, who rank lowest.

Again the data on marital status of parents shows that more "A" group children have the advantage of possible companionship of both parents when compared with "B" or "C"- "D" group children. Only three families existed in which the parents were married but for some unknown reason were living apart. They all belonged to "B" group. The "B" group also possesses the only recorded divorce.

"C"- "D" parents seem to have married at an earlier age than "A" or "B" parents. The average age at which fathers of all groups married is approximately six years in advance of that for the mothers.

Although the average number of children per family is more than five for each group, children with a health rating of "A" apparently come from slightly smaller families than "B" or "C"- "D" children. The average size of "B" families is slightly smaller than "C"- "D".

When comparing the average number of children per family in Brigham City with New York's normal, marginal and relief families, and Ogden and Logan FERA groups, we find Brigham^{City's} families to be considerably larger.

The English nationality predominates in each group, but when comparison is made between the groups we find more of "A" group parents of English descent than is found in "B" or "C"- "D" groups.

Next to the English come the Danes. More of "C"- "D" children have Danes for parents than "B" or "A" children. The Swedes claim third place

with "A" group exceeding "B" or "C"- "D" groups in percentage of parents of this nationality. Germans are of about equal proportion in each group. Of all other nationalities "B" group presents the largest percentage.

Whereas all parents of "A" rated children are American born, but 94.3 percent of the parents of "B" and 84.6 percent of "C"- "D" parents are Americans by birth.

Significant Findings

Social and economic data obtained from the families and from other sources of the children examined by the doctors shows that:

1. Child mortality is more prevalent among "C"- "D" than either "A" or "B" group families. The rate of the latter two groups was very nearly equal.

2. "A" rated children were more generally among the first-born than the last-born children in each family.

3. On the whole, "A" rated children come from families with higher incomes, greater net value of property owned, and from families whose heads are represented in the upper occupational groups. The families of "B" group children, who came next, ranked higher in these respects than those from "C"- "D" families.

4. For school attendance and scholarship, children with health ratings of "A" or "B" have records superior to those with a "C"- "D" physical status.

5. About twice as many "C"- "D" as "A" or "B" children have been retained once or more in school.

6. More "A" group pupils participated in extra-curricular activities than those with lower physical ratings.

7. The educational status of "C"- "D" parents is somewhat inferior to that of the parents of "A" or "B" group boys and girls.

8. Home ownership for "A", "B" or "C"- "D" group homes shows little variation, but when home ownership, as found in the Brigham City study is compared with that found in the Ogden and Logan FERA studies, we find a greater proportion of Brigham City families owning their homes.

9. When compared with a satisfactory standard, overcrowding is rather a general condition in Brigham City homes. Overcrowding was slightly more

prevalent in the FERA dwellings in Ogden and Logan than in the Brigham City area.

10. On an average, "A" and "B" group houses are newer than "C"- "D" group houses.

Compared with Plain City and the Logan and Ogden FERA groups, Brigham City has more homes between sixty and seventy years old. The percentages of houses coming within intervals representing houses of more recent construction are approximately the same in each area.

11. With the exception of kitchen sinks, for which "C"- "D" groups show the greatest percentage, "A" group homes were consistently found with more modern conveniences than either "B" or "C"- "D" group houses. Generally, though it was not always the case, "B" homes were equipped with a greater number of conveniences than were "C"- "D" dwellings.

12. On the whole, the Brigham City families have more modern conveniences than do the Ogden FERA, Logan FERA and Plain City families. Exceptions to this statement are: (1) Plain City homes have more automobiles when compared with the Brigham City, Ogden FERA and Logan FERA families; (2) Ogden FERA families surpass all groups with respect to indoor toilets and kitchen sinks.

13. Home educational facilities such as books, newspapers and magazines were more prevalent in the homes of children with "A" health ratings than those with a "B" or "C"- "D" physical status.

14. More children with ratings of "A" tend to come from homes where both parents are represented, and they also tend to be from slightly smaller families as compared with children rated "B", "C" or "D".

15. In conclusion, the data in this study signify that the most healthy

children (those with "A" ratings) were found to have fewer physical defects of a less serious type; they tend to come from families of higher economic standing; their parents are somewhat better educated; the housing conditions under which they live are relatively more superior; and they usually belonged to families of a higher social status, as evidenced by family relations, than children with lower physical ratings.

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APPENDIX

General Instructions

1. Leave spaces blank opposite item that does not apply to particular case.
2. If information is available, but for some reason or other it is impossible to obtain, indicate it by marking a horizontal line (____) through the blank opposite the item.
3. If there is information which cannot be obtained during the first interview and it seems evident that it can be secured, place the symbol "cb" in the left-hand side of the blank and make a second call. If the information is not secured on the second visit cross out the symbol "cb" and complete the space according to rule one or two above.

Schedule I

General Information

A. Family and Household Census and Identification

Date _____

SCHOOLING				Age			
Living	Sex	Age	Highest No. Gr.	Attend- ing	When Married	Marital Status	Where now living
1. Hus.							
2. Wife							
3. Chn.							
4. "							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
Others including Lodgers, boarders, and hired persons							Relation to head
12.							
13.							
14.							
15.							
16.							
17.							
18.							

B. Child Mortality

(a) Number of children from present marriage who are deceased.

1.	Age child died	_____
2.	" " "	_____
3.	" " "	_____
4.	" " "	_____
TOTAL		_____

(b) Number of children from past marriages who are deceased.

Father's Children

1.	Age child died	_____
2.	" " "	_____
3.	" " "	_____
TOTAL		_____

Mother's children

1.	Age child died	_____
2.	" " "	_____
3.	" " "	_____
TOTAL		_____
GRAND TOTAL		_____

C. Race: (a) Father _____ (b) Mother _____

D. Nationality: (a) Father _____ (b) Mother _____

E. Where born: (a) Father _____ (b) Mother _____

F. Religion: (a) Father _____ (b) Mother _____

Schedule II

Record of defects at time of examination and date defect was removed

Name of child _____ Age _____ Sex _____ Ward _____
Name of parents or guardians _____
Address _____
Grade child is in _____

A. DEFECTS: (Check signifies defect major or minor)

	Defect	Date Removed	Remarks
1. Weight:	:	:	:
(a) Underweight	:	:	:
(b) Overweight	:	:	:
2. Eyes	:	:	:
3. Teeth	:	:	:
4. Chest	:	:	:
5. Posture	:	:	:
6. Feet	:	:	:
7. Ears	:	:	:
8. Adenoids	:	:	:
9. Tonsils	:	:	:
10. Sinuses	:	:	:
11. Scalp	:	:	:
12. Goiter	:	:	:
13. Skin	:	:	:
14. Spine	:	:	:
15. Heart	:	:	:
16. Lungs	:	:	:
17. Nutrition	:	:	:
18. Nervous condition	:	:	:
19. Other defects:	:	:	:
	:	:	:
	:	:	:
Total	:	::	:

Schedule III

Educational Information

A. School Attendance

1. Number of classes missed for year 1935-36 _____
2. Number of classes held for year 1935-36 _____
3. Per cent attendance for year 1935-36 _____

B. Scholarship

1. Average grade in per cent for the year 1935-36 _____

Schedule IV

Income, wealth and occupational status of the parents and other members of the immediate family

A. Ownership of property by parents or guardians at time of the interview. (Property owned by other members of the family included)

	:Descr.of item:			Value		:Incumbrances		: Net
	:Parents:	:Other:	:Parents:	:Other:	:Parents:	:Other:	:Total	
Business	:	:	:	:	:	:	:	:
House	:	:	:	:	:	:	:	:
Furn. and household eqp.	:	:	:	:	:	:	:	:
Garage and other blds.	:	:	:	:	:	:	:	:
Machinery incl. auto	:	:	:	:	:	:	:	:
Land	:	:	:	:	:	:	:	:
Investments (stocks and	:	:	:	:	:	:	:	:
bonds etc.) Bld. & Loan	:	:	:	:	:	:	:	:
Miscellaneous	:	:	:	:	:	:	:	:
TOTAL	:	:	:	:	:	:	:	:

B. Income of parents or guardians and other members of the family at time of interview

	Forms of					: Description
	:Labor:	:Interest:	:Rents:	:Business Prof.:	:Total	
Father 1935	:	:	:	:	:	:
TOTAL	:	:	:	:	:	:
Mother 1935	:	:	:	:	:	:
TOTAL	:	:	:	:	:	:
Others 1935	:	:	:	:	:	:
TOTAL	:	:	:	:	:	:
GRAND TOTAL	:	:	:	:	:	:

C. Number of parents and children having bank savings at time of interview

1. Father _____ TOTAL _____
 2. Mother _____
 3. Children _____

D. Number of parents or guardians and children having life insurance at time of interview

1. Father _____ TOTAL _____
 2. Mother _____
 3. Children _____

Number of children insured _____ Number not insured _____

Schedule IV continued

E. Occupational status of parents or guardians of child (1936)

	Father	Mother
I- Not a worker	:	:
II- Agricultural:	:	:
1. Farm operators:	:	:
a. Owners	:	:
b. Tenants:	:	:
(1) Cash renters	:	:
(2) Share renters	:	:
(3) Croppers	:	:
c. Farm managers	:	:
2. Farm laborers	:	:
III- Non-agricultural:	:	:
1. Professional and technical	:	:
2. Proprietors, managers and Officials	:	:
3. Clerical and allied workers	:	:
4. Skilled workers and foreman	:	:
5. Semi-skilled workers	:	:
6. Servants and allied workers	:	:
7. Inexperienced workers	:	:
8. No usual occupation	:	:

Occupation of father _____

Occupation of mother _____

Schedule V

Extra-curricular activities sponsored by school

Name of student _____

A. Participation in student government offices:

Place a check in the square opposite the office or offices you have held during the current year--1935-36. If you held no offices leave the square blank.

1. Class officer	: check
Pres.	:
Vice pres.	:
Sec. and Tres.	:
Cheer leader	:
2. Student body officer	:
Pres.	:
Vice pres.	:
Sec. and Tres.	:
Cheer leader	:
3. Hall monitor	:
4. Student council	:

B. Physical activities: (Do not check unless you played on a team that competed class against class or school against school)

	check
Volley ball	:
Soft ball	:
Touch ball	:
Pentathalon	:
Basket ball	:
Track	:
Base ball	:
Horse shoe	:
Tennis	:
Swimming	:
Total-----	:

C. Special interest activity

	: check
Vocal classes	:
Member of chorus	:
Member of band	:
Spring festival	:
Speech dept. (plays--No.)	:
State reading circle	:
Total-----	:
Grand Total-----	:

Schedule VI

HOUSING

Name of parents		Date of interview
I	I. General:	
	A. Family: 1- No. in family	_____
	2- No. in household	_____
	B. House: Owned or rented	_____
	2- Materials:	
	a. adobe	_____
	b. log	_____
	c. cement	_____
	d. stucco	_____
	e. brick	_____
	f. stone	_____
	g. frame	_____
	h. other	_____
	C. Basement (yes or no)	_____
	D. Type of insulation:	
	1- Heat	_____
	2- Sound	_____
	3- None	_____
	E. 1-No. used windows screened.	_____
	2-No. used win. unscr.	_____
	3-No. used doors scr.	_____
	4-No. used doors unscr.	_____
	F. 1-Floor covering (no. of)	_____
	2-Solid felt rugs (no.)	_____
	3-Piece rugs (no.)	_____
	4-Other (no.)	_____
	G. Adequacy:	
	1-Total no. rooms	_____
	2-No. bedrooms	_____
	3-No. halls	_____
	4-Lin. or Cong. (no.)	_____
	5-No. porches (total)	_____
	6-a. Screened porches	_____
	b. Unscreened	_____
	7-No. closets	_____
	8-Living room	_____
	9-Dining room	_____
	10.Kitchen	_____
	11.No. beds	_____
	12.Library	_____
	13.Office room	_____
	H.14.Coal room	_____
	15.Furnace room	_____
	16.No. storage rooms	_____
	17.No. work rooms	_____
	18.No.families using bath	_____

Schedule VI continued

II. Conveniences:

A. Refrigeration

1. Ice
2. Electric
3. Gas
4. None

B. Heating

1. Fireplace
2. Stoves
3. Circulating heater
4. Steam
5. Hot water
6. Hot air piped
7. Hot air pipeless
8. Gas heaters
9. No. elec. heaters
10. No. ker. heaters

C. Lighting

1. Kerosene lamp
2. Electric
 - a. Home plant
 - b. Power line
3. Other

D. Laundry

1. Laundry room
2. Floor drain
3. Stationary tubs
4. Electric washer
5. Hand washer
6. Other power washer
7. Without washer
8. Electric iron
9. Ironing board
10. Water connection
 - a. Hot
 - b. Cold

E. Cooking: Distance to
water

1. Stoves
 - a. Wood
 - b. Coal
 - c. Gas or ker.
 - d. Electric plate
 - e. Electric dish
washer
 - f. Electric
 - g. Gas

F. Water supply

1. Village system
2. Private system
3. Deep spring
4. Cistern
5. Well (open)

Schedule VI continued

6. Well (closed)	_____
7. Well (flowing)	_____
8. Hand pump inside	_____
9. Hand pump outside	_____
10. Power pump	_____
11. Windmill	_____
12. Piped cold inside	_____
13. Piped hot inside	_____
14. Carried distance	_____
G. Sewage disposal:	
1. Outdoor privy(sanitary)	_____
2. Outdoor privy(unsanitary)	_____
3. Cesspool	_____
4. Ceptic tank	_____
5. Community sewerage	_____
6. Kitchen sink	_____
7. Surface drainage	_____
a. Toward house	_____
b. Away from house	_____
H. Bathroom fixtures:	
1. Wash bowl	_____
2. Toilet cabinet	_____
3. Movable tub	_____
4. Stationary tub	_____
5. Shower	_____
6. Lavatory	_____
7. Hot water connection	_____
8. Cold water connection	_____
I. Miscellaneous conveniences:	
1. Electric sweeper	_____
2. Electric fan	_____
3. Electric sewing machine	_____
4. Other sewing machine	_____
5. Electric dryer	_____
6. Electric curlers	_____
7. Telephone	_____
8. Radio	_____
9. Piano	_____
10. Automobile	_____
III. Reading facilities:	
A. No. books in home	_____
B. No. mazazines taken	_____
1. List	_____
2.	_____
3.	_____
C. No. daily newspapers: List	_____
1.	_____
2.	_____
IV. Remarks	_____

Schedule VII

Delinquency

A. Nature of delinquencies:

1. None _____
2. Truancy _____
3. Auto theft _____
4. Stealing or atpt _____
5. Shoplifting _____
6. Sex offenses _____
7. Running away _____
8. Incurrible _____
9. Ungovernable, etc. _____
10. Injury or att. at _____
11. Gambling _____
12. Tea, coffee, tobacco _____
13. Alcohol & drugs _____
14. Other (Mention) _____
- Total-----

B. Attitude of Parents or Guardians of child:

1. Cooperative _____
2. Indifferent _____
3. Antagonistic _____

C. Friends in play:

1. Alone _____
2. With children own age _____
3. With children older _____
4. With children younger _____
5. Other _____

D. Association in delinquency:

1. Alone _____
2. One other _____
3. Two other _____
4. Three or more _____

E. Membership in church and Community Organizations:

1. Boys
Boy scout _____
4 H. club _____
Primary _____
Priesthood _____
Other (specify) _____
(Total boys) _____
2. Girls
Bee Hive _____
Jr. Girls _____
Primary _____
4 H. Club _____
Other (specify) _____
(Total girls) _____

F. Favorite kinds of books:

1. Science series _____
2. Adventure _____
3. Mystery _____
4. Sex _____
5. Romance _____
6. Fairy Tales _____
7. Historical _____
8. Western (Frontier) _____
9. Poetry _____
10. Other (specify) _____

G. Favorite Movies:

1. Sex _____
2. Adventure _____
3. Westerners _____
4. Romance _____
5. Mystery _____
6. Historical _____
7. Educational _____
8. Other (specify) _____
- Favorite actor _____
- Favorite actress _____

H. Favorite Radio Programs:

1. List: _____
2. _____
3. _____

I. Discipline of parents or guardians achieved by:

1. Whipping _____
2. Bribery _____
3. Coaxing _____
4. Advice _____
5. Reasoning _____
6. Scolding _____
7. Depriving _____
8. Other (specify) _____